

Geometry National Curriculum Overview

National Curriculum Year 1					
<p><u>Measurement: Mass and Weight</u></p> <p>I can compare, describe and solve practical problems for mass/weight (e.g. heavy/light, heavier than, lighter than)</p> <p>I can compare, describe and solve practical problems for capacity and volume (e.g. full/empty, more than, less than, half, half full, quarter)</p> <p>I can measure and begin to record mass/weight</p> <p>I can measure and record capacity and volume</p>	<p><u>Shape: 2D and 3D Shapes</u></p> <p>I can recognise and name common 2d shapes (e.g. rectangles (including squares), circles and triangles)</p> <p>I can recognise and name common 3d shapes (e.g. cuboids (including cubes) pyramids and spheres)</p>	<p><u>Measurement: Length</u></p> <p>I can compare, describe and solve practical problems for lengths and heights [for example, long/short, longer/shorter, tall/short, double/half]</p> <p>I can measure and begin to record lengths and heights</p>	<p><u>Money: Recognising Value</u></p> <p>I recognise and know the value of different denominations of coins and notes</p>	<p><u>Position and Direction: Whole, half, quarter and three quarter turns</u></p> <p>I can describe position, direction and movement, including whole, half, quarter and three-quarter turns</p>	<p><u>Time: Sequencing</u></p> <p>I can compare, describe and solve practical problems for time (e.g. quicker, slower, earlier, later)</p> <p>I can measure and begin to record time (hours, minutes, seconds)</p> <p>I can sequence events in chronological order using language (e.g. before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening)</p> <p>I recognise and use language relating to dates, including days of the week, weeks, months and years</p> <p>I can tell the time to the hour and half past the hour and draw the hands on a clock face to show these times</p>
Small Steps					
<ul style="list-style-type: none"> Explain that items can be compared using length and height Explain that items can be compared using weight and mass Explain that items can be compared using capacity Count a set of objects Solve problems by comparing sets of objects Use equality and inequality symbols to compare sets of objects Use equality and inequality symbols to compare the relative size of two numbers Explain what a whole is Explain that a whole can be split into parts Explain that a whole can represent a group of objects Identify a part of a whole group Explain what a part-part-whole model is Use a part-whole model to represent a whole partitioned into two parts 	<ul style="list-style-type: none"> Composing pattern block images Copy, extend and develop repeating pattern block patterns Copy, extend and develop repeating and radiating pattern block patterns Compose tangram images Examine tetromino and pentomino arrangements Examine ways that four cubes can be composed into different 3D models Explore and recognise 3D shapes Explore discuss and compare 3D shapes Identify 2D shapes within 3D shapes Sort 2D shapes within 3D shapes and investigate nets Explore and recognise 2D shapes Explore, discuss and compare 2D shapes Explore, discuss and identify circles and shapes that are not circles from shape cut-outs Explore, discuss and identify triangles and shapes that are not triangles from shape cut-outs 	<ul style="list-style-type: none"> Comparing lengths Measure one object with different non-standard measures Record outcomes from measuring one object with different non-standard measures Measure items using individual cm cubes Measure items using individual cm cubes and record outcomes Measure length from zero cm using a ruler Solve problems by measuring different lengths in cm using a ruler Estimate length in cm Estimate length, measure length and record these values in a table Solve problems by estimating length measuring length and recording these values in a table 	<ul style="list-style-type: none"> Count efficiently in groups of two Count efficiently in groups of ten Count efficiently in groups of five Count efficiently by counting in groups of two five and ten Recognise and explain the value of the 1p coin in pence Recognise and explain the value of the 2p coin in pence Recognise and explain the value of the 5p coin in pence Recognise and explain the value of the 10p coin in pence Understand and explain that a single coin can be worth several pennies Solve money problems involving a group of pennies 	<ul style="list-style-type: none"> Using positional and directional language Using positional and proportional language Understanding rotation Understanding rotation with whole, half quarter turns Solve problems involving position and direction 	<ul style="list-style-type: none"> Sequence events in the school day in chronological Sequence everyday events in chronological order Sequence events across a week in chronological order Use language relating to days of the week Use language relating to days weeks, months and years Draw and label a clock face talking about the hours Tell the time to the hour using the hour hand Tell the time to the hour using the hour and minute hands Tell the time to the half hour using the hour hand Tell the time to the half hour using the hour and minute hands

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<ul style="list-style-type: none"> Use a part-whole model to represent a whole partitioned into more than two parts Solve problems using a part-whole model to represent a whole partitioned into more than two parts 	<ul style="list-style-type: none"> Explore, discuss and identify rectangles including squares from shape cut-outs 				
			<ul style="list-style-type: none"> Use knowledge of the value of coins to solve problems Calculate the total value of the coins in a set of 2p coins Calculate the total value of the coins in a set of 5p coins Calculate the total value of the coins in a set of 10p coins Compare sets of 2p, 5p and 10p coins Find how many 1p coins are needed to make a given value Find how many 1p and 2p coins are needed to make a given value Find how many 1p 2p and 5p coins are needed to make a given value Find how many 1p 2p 5p and 10p coins are needed to make a given value Solve problems finding out how many identical coins are needed to make a given value 		
			<ul style="list-style-type: none"> Solving problems with money in a real-life context Work out how many coins are needed to make a value of 10p and find different ways Work out how many coins are needed to make a total value of 20p and find different ways Use coins to find totals of small amounts of money Solve problems using coins to find totals of small amounts of money 		
Key Vocab					
<p>Mass, weight, heavy, light, heavier than, lighter than, measure, full/empty, more than, less than, half, half full, quarter, turn.</p>	<p>Rectangles, squares, circles, triangles, cuboids, cubes, pyramids spheres. 3D and 2D. Shape.</p>	<p>Compare, length and height, long/short, longer/shorter, tall/short, double/half.</p>	<p>Coin, note, pound, penny, change, shop, value.</p>	<p>Position, direction, movement. Whole, half, quarter, three-quarter, turn.</p>	<p>Solve, time, quicker, slower, earlier, later, hours, minutes, seconds. Sequence, events, chronological order. Before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening. Clock, watch.</p>

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National Curriculum Year 2					
<p><u>Shape: 2D and 3D Shapes</u></p> <p>I can identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line</p> <p>I can identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces</p> <p>I can identify 2-D shapes on the surface of 3-D shapes [for example, a circle on a cylinder and a triangle on a pyramid]</p> <p>I can compare and sort common 2-D and 3-D shapes and everyday objects.</p>	<p><u>Money: Addition and Subtraction</u></p> <p>I recognise and use symbols for pounds</p> <p>I can find different combinations of coins that equal the same amounts of money</p> <p>I can solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change</p>	<p><u>Time: To 5 minutes</u></p> <p>I can compare and sequence intervals of time</p> <p>I can 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</p> <p>I know the number of minutes in an hour and the number of hours in a day.</p>	<p><u>Position and Direction: Vocabulary</u></p> <p>I can order and arrange combinations of mathematical objects in patterns and sequences</p> <p>I 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)</p>	<p><u>Measurement: Length, Capacity, Volume and Mass</u></p> <p>I can choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels temperature</p> <p>I can compare and order lengths, mass, volume/capacity and record the results using >, < and =</p>	<p><u>Statistics: Charts</u></p> <p>Construct and interpret simple pictograms, tally charts, block diagrams and simple table</p> <p>Ask questions about totalling and comparing categorical data.</p> <p>Ask simple questions by counting the number of objects in each category and sorting the categories by quantity</p>
Small Steps					
<ul style="list-style-type: none"> Know that a polygon is a 2D shape with straight sides that meet at vertices Describe polygons and find different ways to sort them Know that polygons can be sorted and named according to the number of sides and vertices Discuss and compare the shape and size of polygons by direct comparison Discuss and compare the vertices of polygons by direct comparison Investigate how polygons can be joined and folded to form 3D shapes Describe 3D shapes according to their properties Find ways to sort 3D shapes Discuss and compare the shape and size of 3D shapes Discuss and compare the properties of 3D shapes 	<ul style="list-style-type: none"> Secure recognising coin values Recognise and use the symbols for pounds £ and pence p Find different combinations of coins that equal the same amount of money Solve problems involving adding and subtracting money Solve problems involving adding and subtracting money and giving change 	<ul style="list-style-type: none"> Know the number of minutes in and hour and hours in a day Understand that the clock face shows hours and minutes on the same scale Tell and write quarter past and quarter to on a clock face Tell and write the time to 5 minutes on a clock face Compare and sequence intervals of time in hours 	<ul style="list-style-type: none"> Order and arrange objects in patterns and sequences and explain the patterns Use mathematical vocabulary to describe position, direction and movement Use mathematical vocabulary to describe rotation as a turn Describe turns as a quarter, half, three quarter or full turn Solve problems involving position, direction and rotation 	<ul style="list-style-type: none"> Explain why standard units of measure are needed Length can be measured in any direction to give height, length and distance Length can be measured in metres and centimetres Use counting and place value to read measure scales in metres and centimetres Compare and order lengths Mass can be measured in grams and kilograms Compare and order measurements of mass Volume and capacity can be measured in litres and millilitres Compare and order measurements of volume and capacity Read scales in different contexts including temperature 	<ul style="list-style-type: none"> Compare numbers and describe how many more or less there are in each set Calculate the difference Calculate the difference in different contexts Explain what the difference is between consecutive numbers Calculate the difference when information is presented in a pictogram Calculate the difference when information is presented in a bar chart Use knowledge of subtraction to solve problems in a range of contexts Use knowledge of addition and subtraction to solve problems in a range of contexts
			<ul style="list-style-type: none"> Solving problems with money in a real-life context Work out how many coins are needed to make a value of 10p and find different ways Work out how many coins are needed to make a total value of 20p and find different ways 		

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			<ul style="list-style-type: none">• Use coins to find totals of small amounts of money• Solve problems using coins to find totals of small amounts of money		
Key Vocab					

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National Curriculum Year 3					
<p><u>Measurement: Length, volume, mass</u></p> <p>I can measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)</p>	<p><u>Statistics: Analysing data</u></p> <p>Interpret and present data using bar charts, pictograms and tables</p> <p>Solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?' using information presented in scaled bar charts and pictograms and tables.</p>	<p><u>Position and Direction: Angles</u></p> <p>I can recognise angles as a property of shape or a description of a turn</p> <p>I can 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</p> <p>I can identify horizontal and vertical lines and pairs of perpendicular and parallel lines</p>	<p><u>Shape: Drawing Shapes and Perimeter</u></p> <p>I draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them</p> <p>I can measure the perimeter of simple 2-D shapes</p>	<p><u>Money: Giving change</u></p> <p>I can add and subtract amounts of money to give change, using both</p>	<p><u>Time: Writing and telling time</u></p> <p>I can tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks</p> <p>I can estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, half past, quarter past/to</p> <p>I know the number of seconds in a minute and the number of days in each month, year and leap year</p> <p>I can compare durations of events [for example to calculate the time taken by particular events or tasks].</p>
Small Steps					
<ul style="list-style-type: none"> Estimate in metres and describe a metre in different ways Measure length and height from zero using whole m or cm Converting between metres and centimetres Millimetres as a unit of measure and the relationship between them and cm Measuring length and height using cm and mm Converting between centimetres and millimetres Estimate and measure lengths and heights and record in a table Using graphs to represent lengths and heights Solve problems involving length Solve problems involving length and height 	<ul style="list-style-type: none"> Compare numbers and describe how many more or less there are in each set Calculate the difference Calculate the difference in different contexts Explain what the difference is between consecutive numbers Calculate the difference when information is presented in a pictogram Calculate the difference when information is presented in a bar chart Use knowledge of subtraction to solve problems in a range of contexts Use knowledge of addition and subtraction to solve problems in a range of contexts 	<ul style="list-style-type: none"> Make different sized angles by rotating two lines around a fixed point Make triangles and quadrilaterals and identify the angles and vertices Draw triangles and quadrilaterals and identify vertices Know that a right angle is a 'square corner' and identify right angles in the environment Know that a rectangle is a 4-sided polygon with four right angles Know that a square is a rectangle in which the four sides are of equal length Know that a right angle describes a quarter turn Investigate the shapes made when rectangles and squares are cut on the diagonal Join four right angles at a point using different right-angled polygons Investigate and draw other polygons with right angles 	<ul style="list-style-type: none"> Identify parts and wholes in the contexts of lines and 3D objects Identify parts and wholes in different contexts Identify equal parts in a whole when they do not look the same in 2D shapes Identify equal parts in a whole when they do not look the same in 3D contexts Solve problems by identifying parts and wholes in a range of contexts 	<ul style="list-style-type: none"> Secure recognising coin values Recognise and use the symbols for pounds £ and pence p Find different combinations of coins that equal the same amount of money Solve problems involving adding and subtracting money Solve problems involving adding and subtracting money and giving change 	<ul style="list-style-type: none"> Know the number of seconds in a minute, days in each month, year and leap year Estimate, measure and compare the timings of events and tasks using a stopwatch Review the scale on a clock face and identify the minutes past and to the hour Tell and write the time on an analogue clock including using Roman numerals Tell and write the time with increasing accuracy using accurate language

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- Use weighing scales with different scales to weigh up to 1kg
- Use tools to measure volume and capacity up to 1 litre with different scales
- Measure mass from zero up to 1kg using grams
- Measure mass from zero above 1kg using whole kg and grams
- Measure volume from zero up to 1 litre using ml
- Measure volume from zero to above 1 litre using whole litres and ml
- Estimate mass in grams and volume in ml
- Estimate then measure mass and volume and record in a table
- Solve problems involving mass
- Solve problems involving volume

- Make compound shapes by joining two polygons in different ways
- Investigate different ways of composing and decomposing a polygon
- Draw polygons on isometric paper
- Use geostrips to investigate quadrilaterals with and without parallel and perpendicular sides
- Make and draw compound shapes with and without parallel and perpendicular sides
- Extend lines and sides to identify parallel and perpendicular lines
- Make and draw triangles on circular geoboards
- Make and draw quadrilaterals on circular geoboards
- Draw shapes with given properties
- Draw shapes with given properties on a range of geometric grids

Key Vocab

Geometry National Curriculum Overview

National Curriculum Year 4					
<p>Measurement: Measures</p> <p>I can convert between different units of measure [for example, kilometre to metre; hour to minute]</p> <p>I can estimate, compare and calculate different measures, including money in pounds and pence</p>	<p>Measurements: Perimeter and Area</p> <p>I can measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres</p> <p>I can find the area of rectilinear shapes by counting squares</p>	<p>Position and Direction: Coordinates</p> <p>I can describe positions on a 2-D grid as coordinates in the first quadrant</p> <p>I can describe movements between positions as translations of a given unit to the left/right and up/down</p> <p>I can plot specified points and draw sides to complete a given polygon</p>	<p>Shape: Symmetry / Angles</p> <p>I can identify acute and obtuse angles and compare and order angles up to two right angles by size</p> <p>I can identify lines of symmetry in 2-D shapes presented in different orientations</p> <p>I can complete a simple symmetric figure with respect to a specific line of symmetry.</p> <p>I can compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes</p>	<p>Time: Converting Time</p> <p>I can read, write and convert time between analogue and digital 12- and 24-hour clocks</p> <p>I solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.</p>	<p>Statistics: Presenting continuous data</p> <p>Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs</p> <p>Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.</p>
Small Steps					
<ul style="list-style-type: none"> Use knowledge of 1,000 to explain common measure conversions in the context of length Use knowledge of 1,000 to explain common measure conversions in the context of volume and capacity Use knowledge of calculation and measure conversions to solve problems involving length Use knowledge of calculation and measure conversions to solve problems involving volume and capacity Use efficient strategies and common measure conversions to solve problems in a range of contexts 	<ul style="list-style-type: none"> Know that a regular polygon has sides that are the same length and angles that are the same size Know that the perimeter is the distance around the edge of a 2D shape Understand that different shapes can have the same perimeter Know that perimeter is measured in units of length and can be found by counting or measuring units Know that perimeter can be calculated by adding together the side lengths of a 2D shape Know that the perimeter of a rectangle can be calculated by addition and multiplication Know that unknown side lengths can be calculated from the perimeter and known side lengths Understand that the perimeter of a regular polygon can be calculated by multiplication Calculate the side length of a regular polygon by division where the perimeter is known Solve problems involving the perimeter and side lengths of polygons 	<ul style="list-style-type: none"> Give directions from one position to another on a grid Move objects including polygons on a grid according to directions and mark the new position Describe translations of polygons drawn on a square grid Draw polygons specified by translations Mark points specified as a translation from the origin Mark the position of points specified by coordinates in the first quadrant of a coordinate grid Write coordinates for already marked points in the first quadrant of a coordinate grid Draw polygons specified by coordinates in the first quadrant Translate polygons in the first quadrant Solve problems involving marking and translating points in the first quadrant on a coordinate grid 	<ul style="list-style-type: none"> Complete a symmetrical pattern when the pattern touches the mirror line Complete a symmetrical pattern when the pattern does not touch the mirror line Compose symmetrical shapes from two identical shapes (congruent) Investigate lines of symmetry in 2D shapes by folding Find lines of symmetry in 2D shapes using a mirror Reflect polygons in a line of symmetry parallel to the sides of the shape Reflect polygons in a line of symmetry not parallel to the sides of the shape Reflect polygons that are dissected (cut) by the line of symmetry Reflect polygons in a line of symmetry that is not vertical or horizontal Identify and create symmetrical patterns and shapes on a range of backgrounds 	<ul style="list-style-type: none"> Read the time on a 24 hour digital clock Convert between times given in 12 and 24 hours Use knowledge of the units of time to convert from hours to minutes and minutes to seconds Use knowledge of the units of time to convert from days to weeks and years to months Solve problems involving writing, telling and converting the time 	

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Key Vocab

National Curriculum Year 5

Statistics: Interpreting data

Solve comparison, sum and difference problems using information presented in a line graph

Complete, read and interpret information in tables, including timetables.

Position and Direction: Reflection and Translation

I can 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.

I can identify 3-D shapes, including cubes and other cuboids, from 2-D representations

Shape: Perimeter and Area

I can measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres

I can calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes

I can use the properties of rectangles to deduce related facts and find missing lengths and angles

Measurement: converting units

I can convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)

I understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints

I can solve problems involving converting between units of time

I use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.

Measurements: Volume

I can estimate volume [for example, using 1 cm³ blocks to build cuboids (including cubes)] and capacity [for example, using water]

Shape: Angles

I know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles

I can draw given angles, and measure them in degrees (o)

I can identify: angles at a point and one whole turn (total 360o) angles at a point on a straight line and half a turn (total 180o) other multiples of 90o

I can distinguish between regular and irregular polygons based on reasoning about equal sides and angles.

Small Steps

- Explain what area is an measure using counting as a strategy with different shapes
- Explain what area is and measure using counting as a strategy with squares
- Explain how to make different shapes with the same area
- Explain how to compare the area of different shapes
- Solve problems involving counting and comparing the areas of different shapes

- Use knowledge of decimal place value to convert between and compare metres and centimetres
- Explain that different lengths can be composed additively and multiplicatively
- Use knowledge of decimal place value to solve problems in different contexts
- Use knowledge of place value to calculate with decimal numbers up to and bridging one tenth
- Use knowledge of column addition and subtraction to calculate with decimals: tenths and hundredths
- Round a decimal number with hundredths to the nearest tenth
- Round a decimal number with hundredths to the nearest whole number

- Explain what volume is in a range of contexts
- Describe the units used to measure volume
- Explain how to calculate the volume of a cuboid and a cube
- Explain how to calculate the volume of compound shapes
- Use knowledge of calculating volume to solve problems in a range of contexts

- Review understanding and identification of right angles
- Review understanding of angles as a measure of turn
- Compare the size of angles where there is a clear visual difference
- Use the terms acute and obtuse when comparing angles to right angles
- Use the term reflex when comparing angles to a right angle or a straight line
- Use the unit of degrees as a standard unit to measure angles
- Describe static angles using the standard unit of degrees when compared to a right angle
- Describe rotations using the standard unit of degrees when compared to a right angle

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			<ul style="list-style-type: none"> • Read and write numbers with up to 3 decimal places • Compare and order numbers with up to 3 decimal places • Solve problems with numbers with up to 3 decimal places 		<ul style="list-style-type: none"> • Estimate acute and obtuse angles using the standard unit of degrees • Know that the angles in a full turn sum to 360 degrees and use this to solve problems • Know that the angles at a point sum to 360 degrees and use this to solve problems • Know that the angles on a straight line sum to 180 degrees and use this to solve problems • Measure the size of angles accurately using a protractor • Draw angles accurately using a protractor • Solve problems involving estimating, drawing, measuring and reasoning about angles
		<ul style="list-style-type: none"> • Measure the area of flat shapes using square centimetres • Measure the area of flat shapes using square metres • Explain how to calculate the area of a rectangle using multiplication • Calculate the areas of rectangles using multiplication • Calculate the area of shapes made from 2 rectangles by decomposing the shape in different ways • Explain how to calculate the missing lengths in compound rectilinear shapes • Choose the most effective way to decompose a shape into rectangles in order to calculate the area • Calculate the area of compound rectilinear shapes made from 2 or more rectangles • Use knowledge of area and efficient calculation strategies to solve problems • Use knowledge of area to solve problems in a range of contexts 	<ul style="list-style-type: none"> • Compare and describe lengths using knowledge of multiplication • Solve comparison and change problems using multiplication • Compare and describe lengths using knowledge of division • Solve comparison and change problems using division • Solve problems involving comparison and change deciding when to use multiplication or division • Compare and describe measurements using knowledge of multiplication and division (mass, capacity) • Compare and describe measurements using knowledge of multiplication and division (time) • Describe changes in measurement using knowledge of multiplication and division • Use knowledge of multiplication and division to solve comparison and change problems • Solve comparison and change problems in a range of contexts 		
			<ul style="list-style-type: none"> • Apply known unit conversions to convert from larger to smaller units of measure • Apply known unit conversions to convert from smaller to larger units of measure • Convert to and from fraction and decimal quantities of larger units • Use known facts to derive common conversions over 1 		

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			<ul style="list-style-type: none"> • Use known facts to carry out conversions that correspond to 100 parts • Solve problems involving different units of measure • Understand approximate equivalence between metric and imperial units such as inches, pounds, pints • Convert between miles and kilometres • Solve problems involving converting between units of time • Solve problems involving converting units in different contexts 		
Key Vocab					

National Curriculum Year 6					
<p><u>Shape: Drawing and Labelling Shapes</u></p> <p>I can draw 2-D shapes using given dimensions and angles</p> <p>I can draw and translate simple shapes on the coordinate plane, and reflect them in the axes.</p> <p>I can recognise, describe and build simple 3-D shapes, including making nets</p> <p>I can compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons</p> <p>I can illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius</p>	<p><u>Position and Direction: Area / Perimeter</u></p> <p>I recognise that shapes with the same areas can have different perimeters and vice versa</p> <p>I recognise when it is possible to use formulae for area and volume of shapes</p> <p>I can calculate the area of parallelograms and triangles</p> <p>I can 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].</p>	<p><u>Statistics: Pie charts</u></p> <p>Interpret and construct pie charts and line graphs and use these to solve problems</p> <p>Calculate and interpret the mean as an average.</p>	<p><u>Measurement: Converting units</u></p> <p>I can solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate</p> <p>I can 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</p> <p>I can convert between miles and kilometres</p>	<p><u>Shape: Angles</u></p> <p>I recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.</p>	<p><u>Position and Direction: Coordinates</u></p> <p>I can describe positions on the full coordinate grid (all four quadrants)</p>

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Small Steps

<ul style="list-style-type: none"> • Use knowledge of shape properties to sketch and identify shapes • Use knowledge of shape properties to draw shapes accurately using rulers and protractors • 3D shapes can be composed from 2D nets • The same 3D shapes can be composed from different 2D nets • When a 2D shape is decomposed and the parts rearranged, the areas remains the same • Any parallelogram can be decomposed and the parts rearranged to form a rectangular parallelogram • Two congruent triangles can arranged to compose a parallelogram • Shapes with the same areas can have different perimeters and vice versa • Reason about shapes using the relationship between side lengths and area and perimeter • Reason about compound shapes using the relationship between side lengths and area and perimeter 	<ul style="list-style-type: none"> • Review and explain how to calculate the area of a parallelogram • Review and explain how to calculate the area of a triangle • Review and explain why shapes can have the same perimeters but different areas • Review and explain why shapes can have the same areas but different perimeters • Describe the relationship between scale factors and side lengths of two shapes • Describe the relationship between scale factors and perimeters of two shapes • Review describing positions on a coordinate grid in the first quadrant • Draw and complete simple shapes by plotting positions on the full coordinate grid • Draw and translate simple shapes on the full coordinate grid • Reflect simple shapes in the axes on a full coordinate grid 	<ul style="list-style-type: none"> • Use understanding of angles, fractions and percentages to interpret pie charts • Use understanding of angles, fractions and percentages to construct pie charts • Interpret line graphs representing two variables in familiar contexts • Construct line graphs representing two variables in familiar contexts • Interpret the scales used in graphs, including pie charts, to solve problems 			
		<ul style="list-style-type: none"> • Explain the relationship between the mean and sharing equally • Explain how to calculate the mean of a set of data including a value of zero • Explain how the mean changes when the total quantity or number of values changes • Explain how to use the mean to make comparisons between two sets of information • Explain why the mean is useful and when it is not appropriate 			

Key Vocab

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