

Geometry Entry Level Overview

Entry Level Year 1					
<p><u>Measurement</u></p> <p>Visually compare lengths, understand and use terms such as longer than, longest, shorter than, shortest.</p> <p>Compare weights of common objects including using terms such as heavier than, lighter than, heaviest, lightest.</p> <p>Read scales showing temperatures from zero.</p> <p>Understand that perimeter is the distance around the outside of a shape. Use measuring equipment to find the perimeter of objects.</p> <p>Understand that area is the space inside a 2D shape and estimate the area of both regular and irregular shapes by counting whole number of squares.</p>	<p><u>Shape</u></p> <p>Sort and classify shapes using language related to angles and sides e.g. straight, right angle, acute, obtuse, curved, corners, perpendicular, parallel, arc.</p> <p>Know and use names for basic shapes e.g. triangle, rectangle, square, circle.</p> <p>Sort and classify solids using language related to angles, edges and faces e.g. straight, right angle, acute, obtuse, curved, corners, perpendicular, parallel.</p> <p>Use a ruler to draw right-angled triangles and rectangles of given side lengths on squared paper.</p>	<p><u>Statistics</u></p> <p>Read and mark a scale or dial whose divisions represent 1 unit, which are labelled in 1s or 2s (numbers up to 20). Read linear scales in familiar contexts.</p> <p>Interpret graphs representing a simple sequence or proportional relationship.</p> <p>Sort and classify objects using a single criterion defined using every day language.</p> <p>Tally objects using recognised notation.</p> <p>Extract information from a frequency table.</p> <p>Construct and interpret a bar graph, using a frequency scale in 1s or 2s.</p> <p>Draw and interpret a pictogram with scale in 1s or 2s.</p> <p>Order small list of numbers (up to ten numbers) to determine most common value (mode) and range of values (biggest–smallest).</p> <p>Interpret most common category from a frequency diagram, including bar charts, pictograms and pie charts.</p>	<p><u>Money</u></p> <p>Recognise British coins in everyday use. Know that £1 is 100p, £2 is 200p, etc. Order collection of coins.</p> <p>Use estimation to explain whether a number of items (no more than five) can be bought for £20.</p> <p>Select coins equivalent to an amount of money up to £1.</p> <p>Give change from £1.</p>	<p><u>Position and Direction</u></p> <p>Understand and use the terms behind, in front of, above, below, right, left, next to, straight on, turn around.</p> <p>Recognise 90 degree angles in common shapes.</p> <p>Recognise parallel and perpendicular lines in common shapes.</p> <p>Estimate size of an angle about a point up to 90 degrees</p> <p>Identify lines and draw shapes with single vertical lines of symmetry. Understand the terms symmetry, symmetrical.</p> <p>Draw the reflection of a simple object in a mirror line on squared paper.</p>	<p><u>Time</u></p> <p>Know and use the fact that there are 60 minutes in an hour to find the end time for a planned activity starting at a given time.</p> <p>Use language associated with time e.g. morning, afternoon, evening, night.</p> <p>Read and write time for digital clocks (in hours and in fifteen minute intervals). Understand and use common time phrases such as quarter past ten, half past three, quarter to five, etc.</p> <p>Know and use basic calendar facts (e.g. days in a week, months in a year and seasons), including common abbreviations.</p>
Small Steps					
<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 	<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 	<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"> 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 	<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"> Solve problems by estimating length measuring length and recording these values in a table 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 Read scales in different contexts including temperature 	<ul style="list-style-type: none"> 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 Explore, discuss and identify rectangles including squares from shape cut-outs 		<ul style="list-style-type: none"> Solve money problems involving a group of pennies 		<ul style="list-style-type: none"> Tell and write quarter past and quarter to on a clock face
<ul style="list-style-type: none"> Know that the perimeter is the distance around the edge of a 2D shape 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 			<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 		

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Key Vocab					
Mass, weight, heavy, light, heavier than, lighter than, measure, full/empty, more than, less than, half, half full, quarter, turn.	Rectangles, squares, circles, triangles, cuboids, cubes, pyramids spheres. 3D and 2D. Shape.	Compare, length and height, long/short, longer/shorter, tall/short, double/half.	Coin, note, pound, penny, change, shop, value.	Position, direction, movement. Whole, half, quarter, three-quarter, turn.	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.

Entry Level 2					
<p>Measurement</p> <p>Estimate heights, lengths and weights of everyday objects.</p> <p>Compare positive integer temperatures.</p> <p>Read and mark a scale or dial whose divisions are labelled and represent 2, 5 or 10 units. Read dial and scales in familiar contexts.</p> <p>Measure the perimeter of rectilinear shapes drawn on cm square grids.</p> <p>Calculate area of rectangles drawn on cm square grids.</p>	<p>Shape</p> <p>Sort and classify polygons by number of sides e.g. triangle, quadrilateral, pentagon, hexagon.</p> <p>Distinguish between different triangles (equilateral, isosceles, right-angled and scalene).</p> <p>Use a ruler and protractor to draw and measure triangles accurately: • side, angle, side • angle, side, angle.</p> <p>Know and use the terms side, edge, corner, square face, rectangular face, triangular face, cube, cuboid, cross section, pyramid, sphere, cone, cylinder</p> <p>Identify lines and draw shapes which have horizontal and/or vertical lines of symmetry.</p>	<p>Statistics</p> <p>Interpret graphs in real-world contexts e.g. money conversion, cost-time.</p> <p>Use a two-circle Venn diagram to sort and classify numeric and graphic data by two criteria.</p> <p>Use systematic listing strategies to identify different outcomes of two combined events i.e. rolling two dice.</p> <p>Understand and complete a tally chart including numerical frequency.</p> <p>Complete or extract information from lists with a maximum of two columns or two rows.</p> <p>Construct and interpret a bar graph, using a frequency scale in 5s or 10s.</p> <p>Order small list of numbers (up to ten numbers) to identify middle value (median).</p> <p>Understand and use range as the difference between the biggest and smallest recorded values on an appropriate frequency diagram.</p> <p>Plot scatter graphs for pairs of data values. Interpret given lines of best fit for points on a given scatter graph.</p>	<p>Money</p> <p>Estimate approximate total cost and expected change for a number of items (no more than ten) to be bought.</p> <p>Use £ and p notation.</p> <p>Select coins equivalent to an amount of money up to £5.</p> <p>Order collection of coins and notes.</p> <p>Give change from £5.</p>	<p>Position and Direction</p> <p>Understand and use the terms clockwise and anticlockwise and the idea of quarter turn, half turn and three quarters turn.</p> <p>Rotate, reflect and translate simple shapes to form a tessellated pattern.</p> <p>Draw the rotation of a simple object through 90 degrees on squared paper.</p> <p>Recognise angles greater than, equal to, and less than 90 degrees in shapes. Measure acute angles to the nearest 10 degrees using a protractor.</p>	<p>Time</p> <p>Find start or end times for a planned time period. Calculate the duration given the start and end times.</p> <p>Understand and use am/pm method of stating time.</p> <p>Read and write time for digital and analogue clocks (in hours and in fifteen minute intervals).</p> <p>Use a calendar to solve problems</p>

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Small Steps					
<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"> 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"> 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"> 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 up to £1 Solve problems involving adding and subtracting money Solve problems involving adding and subtracting money and giving change 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 to make this 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 	<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 Describe turns in terms of clockwise and anticlockwise Describe the rotation of shapes Rotate and reflect simple shapes to create a simple tessellated patterns. 	<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"> 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 		<ul style="list-style-type: none"> Find different combinations of coins that equal the same amount of money – up to £5 Work out how many coins are needed to make a value of £1 and find different ways to make this Work out how many coins are needed to make a total value of £1 and find different ways 		
Key Vocab					
Mass, weight, heavy, light, heavier than, lighter than, measure, full/empty, more than, less than, half, half full, quarter, turn.	Rectangles, squares, circles, triangles, cuboids, cubes, pyramids spheres. 3D and 2D. Shape.	Compare, length and height, long/short, longer/shorter, tall/short, double/half.	Coin, note, pound, penny, change, shop, value.	Position, direction, movement. Whole, half, quarter, three-quarter, turn.	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.

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Entry Level 3					
<p>Measurement</p>	<p>Shape</p>	<p>Statistics</p>	<p>Money</p>	<p>Position and Direction</p>	<p>Time</p>
<p>Add and subtract decimals in context i.e. money, mensuration, etc.</p> <p>Understand how equipment such as trundle wheels, metre rule, etc. can be used to measure distance.</p> <p>Use given measurements to calculate perimeter in mm, cm or m as appropriate.</p> <p>Calculate area of rectangles and triangles drawn to scale on square grids.</p> <p>Read scales showing temperatures above and below zero and compare temperatures.</p>	<p>Distinguish between different quadrilaterals (square, rectangle, kite, trapezium, parallelogram and rhombus).</p> <p>Identify pictures of three-dimensional objects. Identify and sketch nets of cuboids.</p> <p>Understand the terms reflection and reflectional symmetry. Recognise simple plane shapes, patterns or pictures that have reflectional symmetry.</p> <p>Use a ruler and protractor to draw and measure polygons, up to hexagons.</p>	<p>Read and mark a scale or dial whose divisions are labelled appropriately.</p> <p>Work with x- and y-coordinates in positive quadrant.</p> <p>Construct and interpret graphs in real-world contexts e.g. distance-time, money conversion, cost-time</p> <p>Use systematic listing strategies to identify different outcomes of three combined events i.e. drink, meal, dessert.</p> <p>Complete or extract information from printed lists with more than two columns or rows.</p> <p>Construct and interpret a bar graph, using a frequency scale in 50s or 100s.</p> <p>Draw and interpret pictograms.</p> <p>Find mode, median, mean and range of a small list of numbers (up to ten numbers) [formulae to be given].</p> <p>Understand and use median as the middle item in a cumulative count of items using an appropriate frequency diagram.</p> <p>Draw and interpret trends on scatter graphs using terms increase or decrease and positive or negative.</p>	<p>Add and subtract decimals in context i.e. money, mensuration, etc.</p> <p>Understand and use place value to order numbers given to 2 decimal places. Use decimal values in real life contexts i.e. money.</p> <p>Estimate approximate cost of a list of multiple items to determine if purchases can be made within a stated budget.</p> <p>Select coins and notes equivalent to an amount of money up to £20. Give change from £20. Solve problems involving multiplication or division of money by a whole number no greater than 10.</p>	<p>Understand and use the four points of the compass.</p> <p>Draw a simple transformation on a coordinate grid: – reflection in horizontal and vertical lines – rotation about (0, 0) through multiples of 90 degrees – translations e.g. 3 forward, 5 down</p> <p>Know and use the terms acute, obtuse and reflex to describe angles. Measure angles to +/- 2 degrees.</p> <p>Use different polygons to form regular and semi-regular tessellation patterns.</p>	<p>Know and use time conversion facts to solve time problems e.g. 24 hours = 1 day, 60 minutes = 1 hour, 60 seconds = 1 minute.</p> <p>Understand and use 12 and 24-hour clock notation. Convert between 12 and 24-hour clock notation.</p> <p>Read and write time for digital and analogue clocks (in hours and in five minute intervals).</p> <p>Read and use simple travel timetables and other common two-way tables.</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 	<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"> 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 	<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"> 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 	<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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<ul style="list-style-type: none"> Using graphs to represent lengths and heights Solve problems involving length and height 		<ul style="list-style-type: none"> 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"> 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"> 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 					
Key Vocab					
Mass, weight, heavy, light, heavier than, lighter than, measure, full/empty, more than, less than, half, half full, quarter, turn.	Rectangles, squares, circles, triangles, cuboids, cubes, pyramids spheres. 3D and 2D. Shape.	Compare, length and height, long/short, longer/shorter, tall/short, double/half.	Coin, note, pound, penny, change, shop, value.	Position, direction, movement. Whole, half, quarter, three-quarter, turn.	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.