

MATHS: Measure and Geometry Framework

Measure and Geometry framework

Stage 0

- I can match (objects and images)
- I can sort objects according to properties e.g. colour, type of toys
- I can say/indicate the position of an objects (where? – ‘house’)
- I can say/indicate the position of an image (where? – ‘tent’)
- I can fit shapes through a given space/place pieces of a simple puzzle
- I can recognise day and night
- I can exchange a coin for an item in play
- I can complete a inset puzzle
- I can associate a sequence of actions with daily routines. E.g. signing for next activity – sign for snack
- I can categorise objects according to properties such as colour or type e.g. teddies and dinosaurs

Stage 1

- I can find the odd one out (objects and images)
- I can recognise a circle
- I can say/indicate/ show in and out using objects
- I can say/indicate/ show in and out pictorially
- I can understand and identify the concepts of big and small
- I can identify when daily events happen (day and night)
- I can understand that things might happen 'now'.
- I can use/indicate time language (now, before, after)
- I can say/indicate that we use money to buy things
- I can fill and empty containers in play
- I can stack and fit together bricks e.g. Duplo
- I can line up objects (awareness of position).

Stage 2

- I can say/indicate the properties of a circle
- I can recognise a triangle
- I can say/indicate/ show on and under using objects
- I can say/indicate/ show on and under pictorially
- I can show/identify full and empty physically

	<ul style="list-style-type: none"> • I can show/ identify full and empty pictorially • I can identify hot/ cold physically • I can identify hot/ cold pictorially • I can sort objects/pictures into big and small • I can use/indicate time language (first, then, finally) • I can identify heavy and light (objects and images) • I can recognise a 1p coin and say what it is worth • I can make reference to our visual timetables to develop understanding of daily sequences
Stage 3	<ul style="list-style-type: none"> • I can find a side and a corner of a shape • I can say/indicate the properties of a triangle • I can show/identify nearly full and nearly empty physically and pictorially • I can understand and identify the concepts of bigger and smaller physically and pictorially • I can identify biggest and smallest physically and pictorially • I can order 3 objects and pictures from biggest to smallest • I can order 5 objects and pictures from biggest to smallest • I can understand the different times of the day (morning, afternoon, evening) and sort activities into these times of day • I can sequence some activities in my day • I can understand the concepts heavier and lighter and use them to sort objects and images • I can count out the correct amount of 1p's to pay for an item in play
Stage 4	<ul style="list-style-type: none"> • I can identify a rectangle and square • I can say/indicate/ show next to, behind and between using objects • I can say/indicate/ show next to, behind and between pictorially • I can show/identify half full/half empty physically and pictorially • I can show/identify more and less in capacity • I can understand the concepts of long and short • I can compare longer and shorter objects and pictures • I can find the longest and shortest objects and images • I can say the days of the week in order • I can use balance scales to find which item is heavier/lighter/same • I can recognise a 2p, 5p, 10p and say how much they are worth
Stage 5	<ul style="list-style-type: none"> • I can say/indicate the properties of a rectangle and square • I can interact with 3D shapes (which roll? Which stack?)

	<ul style="list-style-type: none"> • I can say/indicate/ show in front, on top and over using objects • I can say/indicate/ show in front, on top and over pictorially • I can order containers from full to empty (nearly full, nearly empty, half full/empty) • I can understand the concepts of tall and short • I can compare taller and shorter objects and pictures • I can find the tallest and shortest objects and images • I can identify if we are measuring height or length • I can identify the weekdays and weekend • I can identify events that happen on different days of the week • I can recognise a 20p, 50p and say how much they are worth
Stage 6	<ul style="list-style-type: none"> • I can talk about and compare the properties of 2D shapes (circle, triangle, square, rectangle) • I can identify the features of 3D shapes (curved, straight, corners, sides, finding 2D shapes in their faces) • I can sort 2D and 3D shapes • I can use the positional language 'top', 'middle', 'bottom', 'above' and 'below' in a range of activities (physical and pictorial) • I can use all my known positional language to describe the position on objects and pictures • I can measure and compare how much liquid a container can hold using non standard measurements (capacity) • I can make a container a quarter full, half full and 3 quarters full (capacity) • I can order containers from full, 3 quarters full, half full, 1 quarter full and empty (capacity) • I can compare the height and length of objects and images • I can measure the length and height of an object/image using non standard measurements • I can use the days of the week and the time language today, tomorrow and yesterday correctly • I can weight objects using non standard measures • I can compare and order the weight of items measured using non standard measures with comparative language and symbols • I can recognise a pound and 2 pound coin and say how much they are worth • I can compare and organise coins
Stage 7	<ul style="list-style-type: none"> • I can recognise a cube, cuboid, cylinder, pyramid (triangular and square based), cone, sphere • I can recognise if a 3D shape has flat or curved sides/faces or both • I can find the odd one out/sort/ talk about similarities and differences of different 3D shapes • I can name the different 2D shape on the faces of my known 3D shapes • I can sort my 2D shapes by their properties (in a variety of ways -sides, corners, curved, straight) • I can use my positional language to map out a describes arrangement (physically and pictorially) • I can show a full, quarter and half turn

	<ul style="list-style-type: none"> • I can show my understanding of left and right physically and pictorially • I can identify and show the directions forwards and backwards (physically and pictorially) • I can find the difference between 2 containers using non standard measure (capacity) • I can understand how to read and use a ruler to measure objects and images (cm) • I can name and order the months of the year • I can say how many days each month has (with a calendar to support) • I can understand the unit of time – seconds • I can understand the unit of time – minutes • I can understand the unit of time - hours • I can estimate and compare times using my understanding of seconds, minutes and hours • I can understand the composition of a clock (where the numerals go and about the hour and minute hands) • I can measure the weight of objects using grams • I can compare and order the weight of objects in grams using comparative language and symbols • I can recognise a 5, 10 and 20 pound note and say how much they are worth • I can order and compare notes (money)
Stage 8	<ul style="list-style-type: none"> • I can recognise a pentagon, hexagon and octagon • I can say/indicate the features of a pentagon, hexagon and a octagon • I can talk/describe about the properties of all known 2D shapes (sides, same/equal, vertices, curved, straight) • I can make and draw my known 2D shapes • I can use ordinal language to describe the positions of objects and pictures • I can understand and use Millilitres to measure the volume of liquid in a container • I can estimate and measure amounts of liquid from unmarked containers • I can compare the length/ height of 2 objects using a ruler • I can measure the length and height of an objects to the nearest cm • I can draw lines of different lengths using a ruler • I can tell the time to the hour (physical and pictorial clock) • I can show a given time on a clock to the hour (physical clock and pictorial) • I can find the difference between the weight of 2 objects (grams and kilograms) • I can understand and identify and kilogram • I can measure weight in kilograms • I can compare and order the weight of objects in kilograms using comparative language and symbols

	<ul style="list-style-type: none"> • I can make the value of larger notes using 5 and 10 pound notes • I can count out amounts using coins and say the total amount (up to a pound) • I can compare amounts of coins (up to a pound) • I can recognise and show that amounts can be made up of different coins • I can use and understand the pence and pound symbols
Stage 9	<ul style="list-style-type: none"> • I can understand/ and identify a symmetrical image • I can find/ draw a line of symmetry • I can use and combine my known positional language (e.g. next to the right house) to describe the position of objects and images • I can describe movement using left, right, forward and backwards (physically and pictorially) • I can measure the capacity of containers in Millilitres and order them • I can understand what a metre is and can find objects larger and smaller than a metre • I can measure objects and read pictorial measurements in metres • I can tell the time to half an hour • I can show a given time on the clock to half an hour • I can use the language half past and o'clock • I can understand and identify quarter past and quarter to on a clock • I can show a given time at quarter past and quarter to on a clock • I can understand how to read a range of scales (what does each interval represent?) • I can measure the weight of objects in grams and kilograms • I can use my understand of Kilograms and grams to solve equivalence questions • I can count amounts in pence and pounds and record the total (notes and coins) • I can add up amounts of money in a number sentence without exchange • I can make the same amount using different coins and notes • I can compare amounts of pounds and pence using coins and notes
Stage 10	<ul style="list-style-type: none"> • I can use a line of symmetry to complete a simple shape • I can use a line of symmetry to complete a more complex shape • I can count the faces on a 3D shape • I can identify the 2D shapes that make the faces of the 3D shapes • I can describe turns (whole, half, quarter, 3 quarter, clockwise, anticlockwise) physically and pictorially • I can understand how much a litre is and identify when I need to use it to measure larger amounts • I can estimate and measure using Litres • I can measure capacity in litres and millilitres

	<ul style="list-style-type: none"> • I can measure lengths and heights above 1 metre using metres and cm • I can tell the time in five minute intervals past and to the hour (e.g. 5 minutes past 10) • I can compare masses of objects in Kilograms and grams • I can find the difference between 2 amounts of money
<p>Stage 11</p>	<ul style="list-style-type: none"> • I can count the edges on a 3D shape • I can count the vertices on a 3D shape • I can sort 3D shapes by their properties • I can describe movements and turns (full/half/quarter/3quarter turns, clockwise/anticlockwise, forwards/backwards, left/right) • I can copy, continue and create patterns using shapes involving turns (full, half, quarter, 3 quarter, clockwise/anticlockwise) • I can use the language of position, direction and movement to travel along a route to a finishing point. • I can understand and use equivalent volumes to solve problems (e.g. children have 1litre jug and will fill it with a 100 ml container how many times will it take to fill the jug?) • I can compare capacity and volumes of liquid using my understanding of millilitres and litres • I can compare lengths and heights using size language and comparative symbols (centimetres and metres) • I can measure in metres, centimetres and Millimetres • I can use my understanding of equivalent lengths (metres, centimetres and millimetres) • I can compare lengths (metres, centimetres and millimetres) • I can show a given time on a clock (in five minute intervals) • I can show/say how many minutes there are in a hour, quarter, half and 3 quarters of an hour • I can find change from a give amount • I can solve a 2 step money problem using my addition and subtraction skills
<p>Stage 12</p>	<ul style="list-style-type: none"> • I can describe the types of turn I need to make to face a requested object/person including clockwise and anticlockwise • I can recognise that a quarter turn is the same as a right angle. • I can recognise right angles in different orientations. • I can name 'acute' and 'obtuse' angles. • I can compare angles (less than right angle, equal to right angle, greater than right angle, acute and obtuse and comparative symbols) • I can identify the x and y axis on a coordinate grid • I can describe position using coordinates • I can add and subtract capacity and volumes

	<ul style="list-style-type: none"> • I can understand what a thermometer is for and that we measure temperature in degrees Celsius • I can understand that the hotter/colder the temperature the higher/lower the degrees • I can read and measure temperatures using a thermometer • I can add and subtract lengths (cm, m, mm) • I can understand and find the perimeter of simple shapes • I can calculate the perimeter of 2D shapes (when given length of 2 sides) • I can work out the amount of minutes in a given time over an hour (e.g 1 hour 30 minutes – 90 minutes) • I can say/show how many hours there are in a day • I can tell the time to the minute • I can add and subtract masses • I can match written amounts of money (fifteen pounds) to a physical amount of money • I can convert pounds and pence and record my findings • I can add and subtract money with exchange
<p>Stage 13</p>	<ul style="list-style-type: none"> • I can measure and draw straight lines (horizontally and vertically) accurately in cm and mm • I can show my understanding of horizontal and vertical • I can find and identify parallel and perpendicular lines • I can classify quadrilaterals using their properties. • I can identify and classify different types of triangles • I can describe 2D shape using my knowledge of angles, lines, symmetry and lengths of sides • I can complete a symmetric figure • I can draw a polygon (on dotted paper using given measurements e.g. a rectangle with sides measuring 4cm and 6cm) • I can name and describe 3D shapes in different orientations • I can make 3D shapes (from construction materials e.g. straws and modelling clay) • I can recognise the nets of different 3D shapes and fold them to make the shapes • I can plot coordinates on a grid • I can draw 2D shapes on a grid when given coordinates • I can understand what area is • I can find the area of a shape that can be divided into small squares by counting the squares/part squares. • I can read a digital clock • I can understand am and pm and order times from earliest to latest using these • I can work out durations of time (hours and minutes)

	<ul style="list-style-type: none"> • I can estimate amounts of money • I can solve problems involving money using the four operations
Stage 14	<ul style="list-style-type: none"> • I can translate shapes on a grid • I can describe a translation on a grid • I can use the formula $L \times B$ to find the area of a square/ rectangle. I can solve problems using this formula. • I can convert between analogue and digital clocks • I can draw and measure all angles, including reflex angles, accurately. • I can read and interpret scales on a range of measuring equipment. • I can draw a triangle accurately, given an angle and the lengths of two sides. • I can find the length of a rectangle given the perimeter and width. • I can find the area of a right angled triangle given the lengths of the two perpendicular sides. • I can find the area and perimeter of a composite shape comprising of squares/rectangle given some of the sides. • I can find the surface area and volume of cubes and cuboids. • I can understand and use degrees to measure, estimate and classify angles • I can draw line and angles accurately • I can rotate shapes through 90 to 180 degrees where the centre of rotation is the vertex/centre of the shape. • I know that the sum of the angles in a triangle/along a straight line is 180 degrees and around a point is 360 degrees and I can calculate unknown angles. • I can reflect a 2D shape in an oblique mirror line where the shape does/does not cross the mirror line. • I can recognise regular and irregular 2D shapes • I can translate a shape along an oblique line. • I can recognise order of rotational symmetry. • I can draw a parallelogram/trapezium of a given area on a square grid • I can reflect a shape in two mirror lines where the shape is not parallel or perpendicular to either mirror. • I can visualise a 3D shape from its net and match the vertices that will be joined. • I can identify where patterns drawn on a 3D shape will occur on its net and vice versa.