

Shape space measures and spacial awareness at Heymann **need links to planning examples**

It is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures

Nursery	Reception
<p>Building blocks to achieve</p> <ul style="list-style-type: none"> • Talk about and explore 2D and 3D shapes eg circles, rectangles, triangles and cuboids using informal and mathematical language: ‘sides’, ‘corners’; ‘straight’, ‘flat’, ‘round’ • Understand position through words alone- no actions or pointing – in, on, under, up, down • Discuss routes and locations, using words like ‘in front of’ and ‘behind’. • Make comparisons between objects relating to size, length, weight and capacity. • Select shapes appropriately eg for building models • Combine shapes to make new ones • Talk about and identify the patterns around them. eg: stripes, designs Use informal language like ‘pointy’, ‘spotty’ • Extend and create ABAB patterns • Begin to use first, then, after that appropriately • Comparison- what is the same? What is different? 	<p>Building blocks to achieve</p> <ul style="list-style-type: none"> • Select, rotate and manipulate shapes in order to develop spatial reasoning skills • Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can. • Continue, copy and create repeating patterns. Notice errors in patterns • Compare length, weight and capacity.
<p>Continuous provision:</p> <ul style="list-style-type: none"> • Natural and man-made objects to create pattern • Construction resources- Lego/Duplo bricks/wooden blocks • 2D shapes to manipulate and explore • Water areas with different containers to compare • Sand areas inside and out where children can compare and talk about filling and emptying different sized containers • Dough to manipulate in different ways • Sensory play (cornflour/glitter/sand) to mark make/copy shapes and patterns • Jigsaws • Geo boards 	<p>Continuous provision:</p> <ul style="list-style-type: none"> • Water areas with different containers to compare • Sand areas inside and out where children can compare and talk about filling and emptying different sized containers • Role play including post office, shops etc where children can compare size and weight of objects. • Cubes to measure length • Rulers • 3D shapes to build with. • 2D shapes to make pictures and patterns with • Pegs, cubes, beads, pens etc to copy continue and create repeating pattern • IWB – create patterns

<ul style="list-style-type: none"> • Toys that encourage positional language (dolls house/teddy bears picnic etc) • Equipment to build obstacle courses (crates/wooden planks) • Patterned paper/clothes/rugs • Beanstalk to compare heights of children/objects/towers • 3D shapes to create with (box modelling/building) • Resources that encourage pattern creating (compare bears/numicon/beads) • Books that explore size in book corner (Goldilocks/superworm etc) 	<ul style="list-style-type: none"> • Record own height, hand/foot length and compare to peers and adults • 2D and 3D shape hunts around the unit • Jigsaws • Printing using shapes • Teddies and other toys to take on positional language journeys • Equipment for obstacle courses • Balance scales • Planting – measure growth of plants • Ribbon, string, dough snakes etc to compare and measure • Egg timers
<p>Role of adult:</p> <ul style="list-style-type: none"> • Model comparative language – bigger/smaller, heavier/lighter, full/empty • Model identifying patterns in clothes/wrapping paper/outside etc • Model repeating patterns with natural objects – eg stick, stone, stick, stone • Noticing shapes in the environment and describing their properties (look the clock is round it's a, can you find anymore circles?) • Modelling positional language – ‘put your hands behind your back’ • Questioning – what is the same? What is different (e.g. shapes/objects) 	<p>Role of adult:</p> <ul style="list-style-type: none"> • Model comparative language using ‘than’ and encourage children to use this vocabulary. For example: “This is heavier than that.” • Ask children to make and test predictions. “What if we pour the jugful into the teapot? Which holds more?” • Model continuing and creating a repeating pattern • Model language to compare and describe shapes
<p>Vocabulary</p> <ul style="list-style-type: none"> • 2D Shape names (circle/square/triangle/rectangle) • Positional language (in/on/under/behind/next to/between) • Heavy/light/heavier/lighter • Full/empty/overflowing • Describing shape vocab: side/corner/straight/curved • Pattern • Same/different (compare) 	<p>Vocabulary</p> <ul style="list-style-type: none"> • Heavy, light, heavier, lighter • Tall, short, long, taller, shorter, longer • Full, empty, overflow • Square, rectangle, triangle, circle, cube, cuboid, sphere, cone, cylinder • Side, corner, face, edge, vertices, flat, curved • Repeating pattern