| Shape-SSM | |
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| **Knowledge** | Children recognize and explore big and small shapes through hands-on activities, helping them understand size differences.<br>They demonstrate an understanding of small shapes by identifying and comparing them with larger shapes in their environment.<br>Children develop an ability to compare the sizes of different shapes, such as identifying the smallest shape in a set of objects.<br>Through exploration, children begin to show curiosity about how the position of shapes changes and affects how they interact with one another.<br>They learn to identify and select shapes based on their size, such as finding a big shape or a small one from a group.<br>Children start exploring how shapes fit together or don't fit, experimenting with rotation and position to see which shapes align.<br>They learn to recogthis nize and name common 2D shapes, such as circles, squares, and triangles, and identify them in the environment.<br>Children also explore 3D shapes like cubes and spheres, learning to describe them using terms such as "edges," "faces," and "vertices."<br>By comparing the sizes of different shapes, children develop an understanding of properties like "bigger," "smaller," and "taller," which helps them in sorting and classifying shapes.<br>Children apply their knowledge to more complex tasks, such as measuring the perimeter of shapes using a ruler and identifying angles in 2D shapes. |
| **Engagement model** | **Exploration**: Do children show interest when presented with different shapes (e.g., circle, square, triangle)? Do they reach out to touch or explore the shapes with their hands?<br><br>**Realisation**: Do children notice that shapes are different from one another and start to explore how they feel (e.g., touching the corners of a square or the curved edges of a circle)? Do they show surprise when a shape is hidden or reappears?<br><br>**Anticipation**: When given a set of shapes, do children automatically reach for or point to a shape they recognize, like a circle or square? Do they vocalize or show excitement when they see a familiar shape?<br><br>**Persistence**: Do children return to a particular shape or set of shapes, trying to interact with them multiple times? Do they keep playing with or looking at shapes when presented again?<br><br>**Initiation**: Can children independently pick up a shape to explore, point to it, or make a choice between different shapes? Do they begin to understand that shapes can be used to create a pattern or complete a simple shape activity (e.g., putting together a shape puzzle)? |

Maths Curriculum Learning Intentions- Shape

| Levels | Learning Intentions | Activity ideas | Assessment links |
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| **H4** | To recognize and explore the concept of big shapes.<br>To demonstrate an understanding of small shapes through exploration.<br>To compare big and small shapes by pointing or identifying them.<br>To identify the smallest shape in a set of objects.<br>To demonstrate interest in how the position of big or small shapes changes within a set.<br>To explore objects and shapes that are hidden from sight, showing curiosity about where they are.<br>To show interest in matching big and small shapes or objects.<br>To explore how the position of shapes affects where they can go or fit in relation to other objects. | **Big Shape Hunt:** Hide different big shapes around the room or play area, encouraging children to search for and find them. After each discovery, talk about how big the shape is, using words like “big” or “larger” to reinforce the concept.<br>**Small Shape Exploration:** Provide a variety of small shapes for children to explore. Use sensory materials like textured shapes to keep them engaged, and encourage them to identify and feel the small shapes while labelling them.<br>**Big vs. Small Sorting:** Give children a mixed set of big and small shapes. Ask them to sort the shapes into two groups, big and small. Adults can model sorting and help by naming the shapes as they work.<br>**Find the Smallest Shape:** Present a set of shapes and ask children to find the smallest one. Encourage them to touch and compare the shapes to identify the one that is smallest, using language like “this one is tiny” or “this one is the smallest.”<br>**Shape Position Exploration:** Use a table or tray to arrange big and small shapes in different positions. Ask the children to explore how the shapes are positioned relative to each other and demonstrate how the shape’s position might affect where it can go.<br>**Shape Peekaboo:** Hide shapes under cloths or in boxes and encourage the child to lift them and discover the hidden shapes. This activity supports object permanence and helps children understand that the shapes are still there even though they can’t see them.<br>**Matching Big and Small Shapes:** Provide shapes of various sizes and encourage children to match the big shapes with the smaller ones, either physically or by using pictures or cards showing shapes of different sizes.<br>**Shape Position Games:** Set up a fun activity with shapes that need to fit into a space (e.g., a shape puzzle or a large board). Encourage children to explore how the position of big or small shapes changes depending on where they are placed. | 1. Pupils search for objects that have gone out of sight, hearing or touch, demonstrating the beginning of object permanence<br>2. Pupils match big objects and small objects<br>3. They demonstrate interest in position and the relationship between objects |

Maths Curriculum Learning Intentions- Shape

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| **H5** | To find objects in familiar places.<br>To identify and select big and small shapes.<br>To compare which shape is bigger or smaller.<br>To explore where shapes can be placed and how their position changes.<br>To understand which shape is the biggest or smallest in a group.<br>To show curiosity about how objects are positioned in space.<br>To match shapes by size when asked.<br>To explore how shapes fit or don't fit together based on size. | **Shape Search**: Hide a big and small version of the same shape around the room or in a sensory tray. Ask children to find and identify the shapes by size.<br>**Big or Small Sorting**: Provide a mix of big and small shapes. Ask children to sort them into two groups: big and small.<br>**Shape Match**: Place a big shape and a small shape on the table. Ask children to match each shape with another of the same size.<br>**Shape Comparison**: Show two shapes of different sizes and ask children to identify which is big or small.<br>**Position Exploration**: Place shapes in different positions and ask children to explore where the shapes fit (e.g., on top, beside, or inside other objects).<br>**Shape Stack**: Stack big and small shapes. Ask children to build their own stacks and compare which is taller or shorter.<br>**Shape Discovery**: Place shapes behind an object (like a box or cloth). Ask children to find the shapes and describe them by size.<br>**Shape and Position Game**: Ask children to place a big shape in one spot and a small shape in another. Discuss the relationship between their positions. | 1. Pupils search intentionally for objects in their usual place<br>2. They find big and small objects on request<br>3. They compare the overall size of one object with that of another where there is a marked difference<br>4. They explore the position of objects Topic is still shape. I need some learning intentions to begin with |
| **H6** | To learn to search for shapes removed from a puzzle, demonstrating an understanding of object permanence.<br>To learn to compare the size of shapes, noticing subtle differences in size.<br>To learn to manipulate 3D shapes by building with them or fitting them through appropriately-sized openings.<br>To learn to explore and compare different 3D shapes, identifying similarities and differences in form.<br>To learn to observe how the position of shapes affects how they fit or interact with other shapes.<br>To learn to experiment with rotating and flipping shapes to better understand their properties. | **Shape Puzzle Search**: Set up a shape puzzle with one piece hidden. Ask the pupil to find the missing piece and fit it back into the puzzle, focusing on the shape and its position.<br>**Comparing Shape Sizes**: Lay out two or more shapes of the same kind but in different sizes (e.g., two circles, one big and one small). Encourage the pupil to point to or match the biggest or smallest shape.<br>**Building with 3D Shapes**: Provide 3D shapes like cubes, cones, and cylinders. Ask the pupil to build a tower, place shapes through a hole that fits their size, or create a structure with the shapes.<br>**Exploring 3D Shape Differences**: Give the pupil a set of different 3D shapes (e.g., cube, sphere, pyramid). Let them explore the shapes by holding, stacking, and rolling them. Discuss how they are different. | 1. Pupils search for objects not found in their usual place demonstrating their understanding of object permanence<br>2. Pupils compare the overall size of one object with that of another where the difference is not great<br>3. They manipulate three-dimensional shapes |

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| | | **Position Play with Shapes**: Use large 2D or 3D shapes and ask the pupil to place them in different positions relative to each other, like “put the square on top of the triangle” or “place the circle behind the cube.”<br>**Playdough and 3D Shapes**: Provide 3D shapes (e.g., cube, pyramid, cone) and playdough. Encourage the pupil to rotate and flip the shapes, then press them into the playdough to make impressions, exploring how the shapes fit and change their position. | |
| **H7** | To learn to respond to the word “forwards” by moving a shape in that direction.<br>To learn to respond to the word “backwards” by moving a shape in that direction.<br>To learn to find a shape based on its size (e.g., big or small).<br>To learn to find a shape based on its colour.<br>To learn to find a shape based on whether it has round or straight edges.<br>To learn to use familiar words to compare the size of two shapes (e.g., bigger, smaller).<br>7. To learn to use familiar words to compare quantities of shapes (e.g., more, fewer). | **Moving Shapes Forwards** – Place a shape in front of the pupil and say, “Move the shape forwards.” Encourage them to push or slide it in that direction. You can also use a **ramp** with a **sphere** or **cylinder**, prompting them to release it and watch it roll forwards.<br>**Moving Shapes Backwards** – Place a shape in front of the pupil and say, “Move the shape backwards.” Support them in sliding or rolling it in that direction. If using a **ramp**, have them pull the shape back up before releasing it again.<br>**Finding Shapes by Size** – Scatter big and small shapes. Ask the pupil to find a **big** shape or a **small** shape when prompted.<br>**Finding Shapes by Colour** – Provide a mix of shapes in different colours. Ask the pupil to find a **red shape** or a **blue shape**, encouraging them to match the colour to the description.<br>**Finding Shapes by Edges** – Present shapes with **round** and **straight** edges. Ask the pupil to find a shape with **round edges** or one with **straight edges**, helping them distinguish between the two.<br>**Comparing Shape Sizes** – Give the pupil two shapes that are slightly different in size. Encourage them to use words like **bigger** and **smaller** to describe the difference.<br>**Comparing Quantities of Shapes** – Arrange two groups of shapes, one with **more** and one with **fewer**. Ask, “Which group has more shapes?” and “Which group has fewer shapes?” to reinforce quantity comparison. | 1. Pupils respond to 'forwards' and 'backwards'<br>2. They pick out described shapes from a collection<br>3. They use familiar words in practical situations when they compare sizes and quantities |

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| **H8** | To explore 2D shapes and feel their edges with fingers.<br>To explore 3D shapes and feel their surfaces and edges.<br>To learn to describe shapes using words for their overall form (e.g., “round,” “square,” “triangular”).<br>To learn to describe shapes based on their edges and corners (e.g., “curved,” “straight,” “corners,” “edges”).<br>To learn to describe shapes based on their size (e.g., “big,” “small,” “larger,” “smaller”).<br>To learn to describe shapes based on their thickness (e.g., “thick,” “thin”).<br>To learn to describe shapes in simple pictures or patterns.<br>To learn to recognize and match shapes in pictures or patterns. | **Shape Sorting:** Provide children with a mix of shapes (e.g., circles, squares, triangles) and ask them to sort the shapes into groups based on their overall form (e.g., round, square, triangular).<br>**Edge and Corner Exploration:** Give the children various shapes with different edges (e.g., a circle, square, and triangle). Encourage them to touch and feel the edges and corners. Ask them to describe them using words like “curved,” “straight,” “corners,” and “edges.”<br>**Size Comparison:** Provide pairs of shapes in different sizes (e.g., big and small squares). Ask the children to compare the shapes by saying which is bigger or smaller. Encourage them to use words like “big,” “small,” “larger,” or “smaller.”<br>**Thickness Exploration:** Provide shapes with varying thickness (e.g., thick and thin rectangles). Ask the children to compare the thickness of the shapes by saying which one is thicker or thinner.<br>**Height Comparison:** Give children two shapes, one taller and one shorter (e.g., a tall rectangle and a short square). Ask them to identify which shape is taller and which is shorter. You can encourage them to use the words “taller” and “shorter.”<br>**Length Comparison:** Provide children with two shapes of different lengths (e.g., long rectangle and short rectangle). Ask them to compare the length of the shapes and describe which one is longer or shorter.<br>**Shape Picture Patterns:** Provide pictures or patterns with various shapes in them (e.g., a row of circles, squares, and triangles). Ask children to describe the shapes they see using the terms from the learning intentions (e.g., “This is a round shape,” “This shape is tall”).<br>**Shape Hunt in Pictures:** Show children pictures or diagrams where different shapes are hidden. Ask them to identify and recognize the shapes in the pictures (e.g., “Can you find the square in the picture?”). | 1. They respond to mathematical vocabulary such as 'straight', 'circle', 'larger' to describe the shape and size of solids and flat shapes<br>2. They describe shapes in simple models, pictures and patterns |
| **Y1** | To learn to recognise and name common 2D shapes (e.g., circles, squares, rectangles, triangles). | **Shape Hunt** – Hide 2D shape cutouts around the room. Call out a shape name, and children find and bring it back. | 1. I can recognise and name common 2-D shapes [for example, |

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| | To learn to recognize and name 2D shapes in the environment (e.g., square windows, circular clocks).<br>To learn to recognise and name common 3D shapes (e.g., spheres, cubes, cuboids, pyramids).<br>To learn to recognize and name 3D shapes in the environment (e.g., cubes, spheres, cones).<br>To learn to compare and describe shapes using words like "longer," "shorter," "taller."<br>To learn to compare and describe shapes using words like "heavier" and "lighter."<br>To learn to describe position and movement using words like "whole turn," "half turn," "quarter turn."<br>To learn to compare and order shapes by size.<br>To learn to describe 2D shapes using words like "sides" and "corners."<br>To learn to describe 3D shapes using words like "faces," "edges," and "vertices." | **Shape Feely Bag** – Place different 2D shapes in a bag. Children feel a shape without looking, then describe what they think it is before pulling it out, using an ALD board for support.<br>**Sorting Shapes** – Provide a mix of shapes and have children sort them into groups (e.g., all circles together, all triangles together).<br>**Mystery Object Sorting** – Provide real-world objects (e.g., a ball, a box, a can) and have children sort them into groups based on their 3D shape.<br>**Rolling vs. Stacking** – Test which 3D shapes roll and which ones stack. Discuss how their faces and edges affect this. Use an ALD board to support discussion.<br>**Shape Printing** – Dip 3D shapes into paint and press them onto paper to see the faces they leave behind. Talk about what they see using an ALD board. | rectangles (including squares), circles and triangles].<br>2. I can recognise and name common 3-D shapes [for example, cuboids (including cubes), pyramids and spheres].<br>3. I can compare, describe and solve practical problems for lengths and heights [for example, long/short, longer/shorter, tall/short, double/half].<br>4. I can describe position, direction and movement, including whole, half, quarter and three-quarter turns. |
| **Y2** | To learn to recognize and count the sides of 2D shapes.<br>To learn to identify and count the vertices (corners) of 2D shapes.<br>To learn to explore and recognize line symmetry in 2D shapes.<br>To learn to sort and compare regular and irregular 2D shapes.<br>To learn to name and describe 2D shapes based on the number of sides.<br>To learn to recognize and count the faces of 3D shapes.<br>To learn to identify and count the edges of 3D shapes.<br>To learn to recognize and count the vertices (corners) of 3D shapes.<br>To learn to describe 3D shapes based on their faces, edges, and vertices. | **Count the Sides of 2D Shapes**<br>Provide children with a range of 2D shapes and ask them to count how many sides each shape has. Encourage them to use their fingers to touch and count each side as they go around the shape. This will help them develop an understanding of the sides of different shapes.<br>**Press 3D Shapes into Playdough**<br>Give children various 3D shapes like cubes, spheres, and pyramids along with playdough. Have them press the shapes into the playdough to reveal the 2D faces. Ask them to identify the 2D shapes and count how many sides they see.<br>**Count the Vertices (Corners) of 2D Shapes**<br>Provide children with several 2D shapes and ask them to count the number of vertices (corners). Encourage them to touch each corner while counting to help reinforce the concept of vertices.<br>**Explore Line Symmetry in 2D Shapes**<br>Give children 2D shapes such as squares, rectangles, and triangles. Ask them to fold the shapes to find if there is a line of | 1. I can identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line.<br>2. I can identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces.<br>3. 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].<br>4. I can compare and sort common 2-D and 3-D shapes and everyday objects. |

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| | To learn to sort and compare different 3D shapes by their properties.<br>To learn to explore how 3D shapes can be made from 2D shapes (e.g., net of a cube).<br>To learn to recognize and name 2D shapes on the faces of 3D shapes.<br>To learn to sort 2D and 3D shapes based on their properties (e.g., sorting shapes by the number of sides, faces, or vertices). | symmetry. Discuss whether the two halves match perfectly after folding and label the line of symmetry if it exists.<br>**Sort and Compare Regular and Irregular 2D Shapes**<br>Provide children with a mix of regular (e.g., squares, equilateral triangles) and irregular shapes (e.g., scalene triangles, irregular polygons). Encourage them to sort the shapes into two groups and discuss the differences in their sides and angles.<br>**Name and Describe 2D Shapes Based on Number of Sides**<br>Present children with various 2D shapes and ask them to name each shape based on the number of sides it has. Help them describe the shapes using the terms "sides" and "corners," reinforcing the connection between the number of sides and the shape's name.<br>**Count the Faces of 3D Shapes**<br>Provide children with 3D shapes such as cubes, spheres, and pyramids. Ask them to count how many flat faces are on each shape. Encourage them to describe the faces, using terms like "square," "triangle," or "circle" as they identify them.<br>**Count the Edges of 3D Shapes**<br>Give children various 3D shapes and ask them to count the number of edges on each shape. Discuss the difference between edges (where two faces meet) and faces (the flat surfaces of the shape).<br>**Count the Vertices of 3D Shapes**<br>Ask children to look at different 3D shapes and count the number of vertices (corners) on each. Encourage them to point to each vertex as they count to help reinforce the concept of vertices in 3D shapes.<br>**Describe 3D Shapes by Faces, Edges, and Vertices**<br>Provide children with different 3D shapes like cubes, pyramids, and cylinders. Ask them to describe each shape by counting and talking about its faces, edges, and vertices. This will help them understand how these properties define each shape.<br>**Sort and Compare Different 3D Shapes by Their Properties**<br>Provide children with a variety of 3D shapes and ask them to sort them based on properties such as the number of faces, edges, | |

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| | | and vertices. Encourage them to compare the shapes and talk about how they are similar or different.<br>**Explore 3D Shapes Made from 2D Shapes**<br>Introduce children to nets of 3D shapes, such as the net of a cube or pyramid. Ask them to explore how folding the 2D net can create a 3D shape, helping them understand the relationship between 2D and 3D shapes. | |
| **Y3** | To learn to create a 2D shape using a variety of materials<br>To learn to draw a 2D shape using a ruler.<br>To learn to create a 3D shape using different materials<br>To learn to use a ruler to measure the perimeter of squares.<br>To learn to use a ruler to measure the perimeter of rectangles.<br>To learn to use a ruler to measure the perimeter of triangles.<br>To learn to use a ruler to measure the perimeter of irregular shapes.<br>To learn to find right angles in the environment using a right angle tool.<br>To learn to find right angles in 2D shapes.<br>To learn to identify horizontal lines in the environment.<br>To learn to identify vertical lines in the environment.<br>To learn to identify pairs of perpendicular lines.<br>To learn to identify pairs of parallel lines.<br>To learn to recognize perpendicular and parallel lines in 2D shapes. | **Shape Creation with Materials** – Provide a variety of materials (straws, pipe cleaners, paper, and string) for children to create 2D shapes. Encourage them to explore different shapes and arrange the materials to form them.<br>**Drawing 2D Shapes with a Ruler** – Give children a ruler and ask them to draw squares, rectangles, and triangles on paper, helping them measure and use straight lines to form the shapes.<br>**Building 3D Shapes** – Use modelling clay, straws, and blocks to construct 3D shapes like cubes and pyramids. Encourage children to identify the shapes they create.<br>**Perimeter of Squares** – Provide square-shaped objects and a ruler. Have children measure each side of the square and then calculate the perimeter by adding the sides together.<br>**Perimeter of Rectangles** – Use rectangle cut-outs and a ruler to measure the lengths and widths of the shapes. Help children calculate the perimeter by adding up all sides.<br>**Perimeter of Triangles** – Give children triangle-shaped objects and a ruler to measure each side. Then, they will add the sides together to find the perimeter.<br>**Measuring Irregular Shapes** – Provide irregular shapes like L or zig-zag shapes. Children use a ruler to measure each side and calculate the perimeter.<br>**Finding Right Angles in the Environment** – Take children on a walk around the classroom or school to find right angles using a right angle tool and discuss the locations they find.<br>**Right Angles in 2D Shapes** – Provide cut-out 2D shapes (e.g., squares, rectangles) and ask children to use a right angle tool to check if they have right angles at the corners. | 1. I can measure the perimeter of simple 2-D shapes<br>2. I can draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them<br>3. I can recognise angles as a property of shape or a description of a turn<br>4. I can identify horizontal and vertical lines and pairs of perpendicular and parallel lines |

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| | | **Identifying Horizontal Lines** – Ask children to identify horizontal lines in the classroom (such as bookshelves or tables) and trace them with their fingers.<br>**Identifying Vertical Lines** – Have children find vertical lines in the classroom (such as doors or light posts) and trace them with their fingers.<br>**Perpendicular Lines** – Provide grid paper and ask children to identify and trace pairs of perpendicular lines where they meet at right angles.<br>**Parallel Lines** – Show children pictures of objects with parallel lines (e.g., railroad tracks or bookshelves) and ask them to identify and trace the parallel lines.<br>**Recognizing Parallel and Perpendicular Lines in Shapes** – Provide shape cut-outs that feature parallel and perpendicular lines (such as squares or rectangles). Have children identify and label the lines they see. | |
| **Y4** | To understand and learn to identify rectilinear shapes.<br>To learn to measure and calculate the perimeter of rectilinear shapes, including squares.<br>To understand how to find the area of rectilinear shapes by counting squares.<br>To learn to compare and classify geometric shapes based on their properties, including quadrilaterals and triangles.<br>To learn to identify acute and obtuse angles<br>To learn to compare and order angles up to two right angles by size<br>To learn to identify lines of symmetry in 2D shapes presented in different orientations.<br>To learn to complete a simple symmetric figure with respect to a specific line of symmetry.<br>To learn to describe positions on a 2D grid as coordinates in the first quadrant. | **Rectilinear Shape Hunt** – Go on a shape hunt around the classroom or school grounds to find examples of rectilinear shapes. Children can take photos or draw the shapes they find, and then categorize them based on their properties.<br>**Measuring Perimeter with Rulers** – Provide children with cut-out rectilinear shapes (such as rectangles and squares) and rulers. They will measure the sides of the shapes, add up the lengths, and calculate the perimeter, recording their findings.<br>**Area by Counting Squares** – Create grid paper with various rectilinear shapes drawn on it. Children will count the number of squares inside each shape to find the area, discussing how the grid helps in measuring.<br>**Shape Classification Challenge** – Provide a set of various 2D shapes (e.g., triangles, quadrilaterals, circles). Have students classify them based on properties like the number of sides, angles, and symmetry. They can record their classifications and share findings with the class.<br>**Angle Sorting** – Provide children with protractors and different shaped angles (e.g., acute, obtuse, right angles). They will | 1. I can measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.<br>2. I can find the area of rectilinear shapes by counting squares.<br>3. I can compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.<br>4. I can identify acute and obtuse angles and compare and order angles up to two right angles by size.<br>5. I can identify lines of symmetry in 2-D shapes presented in different orientations. |

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| | To learn to describe movements between positions as translations of a given unit to the left/right and up/down.<br>To learn to plot specified points and draw sides to complete a given polygon. | measure the angles and sort them based on size, identifying acute and obtuse angles as well as comparing them.<br>**Symmetry with Mirrors** – Provide children with paper shapes and a mirror. They will place the mirror along the line of symmetry of different shapes, learning to identify lines of symmetry and how to fold shapes to create symmetrical halves.<br>**Symmetry Drawing** – Children will be given an incomplete shape that has a line of symmetry. They will complete the shape by drawing the missing half, focusing on the symmetry of the figure and understanding how symmetrical shapes are created.<br>**Coordinate Grid Drawing** – Set up a coordinate grid and give children instructions to plot points (e.g., (2,3), (4,5)) to form a specific shape or polygon. They will connect the points to complete the shape.<br>**Movement Translation Game** – On a large grid, give children instructions to move shapes (or themselves) a certain number of units up/down or left/right. This will help them learn translation as a form of movement between positions.<br>**Polygon Drawing Challenge** – Provide children with a set of coordinates to plot on a grid. Once they plot the points, they will connect the points to create a polygon. Children will discuss the shape's properties as they draw it. | 6. I can complete a simple symmetric figure with respect to a specific line of symmetry. |
| **Y5** | To understand the concept of perimeter and apply it to composite shapes.<br>To use a ruler to measure the sides of composite rectilinear shapes and calculate the total perimeter.<br>To understand the area formula (length × width) for rectangles and squares.<br>To calculate and compare the area of different rectangles and squares using standard units.<br>To break irregular shapes into smaller rectangles and squares.<br>To estimate the area of irregular shapes by approximating the area of the smaller parts.<br>To understand how to recognize 3-D shapes such as cubes and cuboids in their 2-D representations. | **Perimeter Puzzle** – Provide students with cut-out pieces of squares, rectangles, and triangles. Ask them to arrange the pieces into a composite shape, then measure the sides using a ruler and calculate the perimeter.<br>**Ruler Measuring Challenge** – Draw a composite shape on a large sheet of paper with various side lengths. Have students measure each side with a ruler, then calculate the total perimeter by adding the lengths together.<br>**Area Blocks** – Give students square grid paper and have them draw rectangles and squares. Students can count the number of unit squares inside each shape to find the area and then use the formula (length × width) to compare.<br>**Area Estimation** – Provide irregular shapes printed on grid paper. Students break them down into smaller rectangles and squares, | I can measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres<br>2. I can calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres ($cm^2$) and square metres ($m^2$) and estimate the area of irregular shapes<br>3. I can identify 3-D shapes, including cubes and other cuboids, from 2-D representations |

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| | To practice identifying 3-D shapes by looking at their flat, 2-D representations.<br>To understand the different types of angles (acute, obtuse, reflex).<br>To estimate and compare angles by visually identifying them.<br>To understand how to use a protractor to measure angles.<br>To practice drawing given angles and measuring them in degrees.<br>To understand that angles at a point add up to 360°.<br>To identify and calculate angles at a point in a complete turn.<br>To recognize that angles on a straight line add up to 180°.<br>To identify and calculate angles on a straight line and understand half a turn.<br>To understand multiples of 90° (90°, 180°, 270°, 360°).<br>To identify and measure angles that are multiples of 90°.<br>To learn the properties of rectangles (opposite sides are equal, angles are right angles).<br>To use these properties to deduce missing lengths and angles in rectangle-related problems.<br>To understand the difference between regular and irregular polygons.<br>To identify regular polygons (with equal sides and angles) and irregular polygons based on their properties. | estimate the area by counting the smaller parts, and compare their estimates.<br>**Shape Match** – Show students pictures of 3-D shapes like cubes and cuboids and provide their 2-D representations (such as nets). Have them match the 2-D representations to the correct 3-D shapes.<br>**Angle Estimation** – Give students protractors and pictures of angles. They should estimate whether the angle is acute, obtuse, or reflex, then measure it with the protractor to check their estimate.<br>**Angle Drawing** – Provide protractors and instructions for drawing specific angles. Have students draw angles of 30°, 60°, 90°, etc., and then measure them to check accuracy.<br>**Angle at a Point** – Draw a circle on a whiteboard, then mark different angles around the point. Have students calculate the angles, making sure they total 360°, and discuss how angles add up to a full turn.<br>**Straight Line Angles** – Draw a straight line on the board and create angles on both sides. Ask students to identify and calculate the angles, ensuring that the total adds up to 180°.<br>**90° Multiples** – Provide students with a series of angles, including 90°, 180°, 270°, and 360°. Have them identify and measure the angles, discussing how each relates to a full turn.<br>**Rectangle Properties** – Give students a rectangle with missing side lengths or angles. They should use the properties of rectangles (opposite sides equal, all angles 90°) to find the missing information.<br>**Polygon Sorting** – Provide a mix of regular and irregular polygons (e.g., squares, triangles, pentagons, hexagons). Have students sort them into two categories and explain why they classified them as regular or irregular based on sides and angles. | 4. I know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles<br>5. I can draw given angles, and measure them in degrees (°)<br>6. I can identify angles at a point and one whole turn (total 360°)<br>7. I can identify angles at a point on a straight line and 1/2 a turn (total 180°)<br>8. I can identify other multiples of 90°<br>9. I can use the properties of rectangles to deduce related facts and find missing lengths and angles<br>10. I can distinguish between regular and irregular polygons based on reasoning about equal sides and angles |
| **Y6** | | | |