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| **Mathematics: Shape, Space and Measures: Shape - Developing Knowledge and Skills Sequentially** |
| **Range/Knowledge** | **Positive Relationships** | **Enabling Environments** |
| 1. | • Explores differently sized and shape items• Begins to put objects of similar shapes inside others and takes them out again | • Encourage babies to explore the characteristics of objects, e.g. by rolling a ball or sliding a block • Demonstrate putting items inside others of similar shape | • Provide interestingly shaped objects to explore.• Make towers for children to knock down using objects that stack |
| 2. | • Stacks objects using flat surfaces• Responds to changes of shape• Attempts to match shapes with spaces on inset puzzles sometimes successfully | • When playing with malleable materials draw attention to shapes as children create and change the materials. | • Provide blocks and boxes to stack, build and solve problems with • Provide a range of inset puzzles and support children as they explore matching shapes with spaces. |
| 3. | • Pushes objects through different shaped holes and tries to fit shapes into spaces on inset boards or puzzles.• Begins to select a shape for specific space• Enjoys using blocks to create their own simple structures/arrangements | • Model thinking about the properties of shapes when selecting them to fit into spaces, e.g. *Oh look, we need a round one*.• When playing alongside children who are building, provide commentary about the shapes you are using. | • Provide a range of inset board and puzzles with large pieces • Provide a range of construction materials forindependent play • Organise storage by their shape, with photos or silhouettes to show where things are kept. |
| 4. | • Chooses puzzle pieces and tries to fit them in • Recognises that two objects have the same shape • Makes simple constructions | • Chat about the shape of the pieces and the holes when fitting pieces into inset puzzles.• Model comparing two objects to see if they have the same shape in purposeful contexts.• Suggest choosing a particular shaped item for a purpose. • Model your thinking when building | • Provide a range of inset/jigsaw puzzles of increasing complexity for children to choose.• Provide a variety of construction materialsincluding some with identical pieces so that children freely explore *same* and *different.* |
| 5. | • Chooses items based on their shape which are appropriate for the child’s purpose• Responds to both informal language and common shape names• Shows awareness of shape similarities anddifferences between objects• Enjoys partitioning and combining shapes to make new shapes with 2D and 3D shapes• Attempts to create arches and enclosures when building, using trial and improvement to select blocks | • Help children choose shapes for a purpose, e.g. a triangular block for a roof and wedge-shaped block for a ramp. • Offer an appropriate or inappropriate shape for what you think the child’s purpose might be to investigate their thinking. • As children experience shapes, use informal language (e.g. *slanty, pointy, twisty, wiggly, bumpy*), common shape names (e.g. *cylinder,* *cone, circle, square*) and “nearly” shapes (e.g. *This is almost a square but it’s got curvy corners*). Find out and use equivalent terms for shapes inhome languages. • Discuss how shapes can be partitioned in everyday contexts, e.g. cutting food in different ways. • Value children’s constructions and solutions to problems they have set themselves and talk about how shapes have combined to make new shapes. | • Provide differently shaped resources to handle,carry, move and explore.• Provide large and small blocks and boxes forconstruction both indoors and outdoors. |
| 6.  | • Uses informal language and analogies, (e.g.*heart-shaped and hand-shaped leaves*), as well as mathematical terms to describe shapes• Enjoys composing and decomposing shapes, learning which shapes combine to make other shapes• Uses own ideas to make models of increasing complexity, selecting blocks needed, solving problems and visualising what they will build | • Encourage children to use the names of shapes and their properties (e.g. *straight, curved, edges*) and prompt them to say what shapes remind them of.• Discuss different examples of the same shape (e.g. equilateral and right-angled triangles) in a variety of orientations.• Take opportunities to discuss the shapes that children paint, draw and collage and shapes noticed in their local environment usingregular shapes and shapes with no name.• When acting out their own stories encourage children to make the shapes involved on their own or with others.• When constructing, sensitively discuss which shapes make other shapes (e.g. triangles making rectangles and hexagons with patternblocks or mosaic tiles).• Challenge children to make more complex constructions, such as towers of arches, a window or a staircase. | • Provide resources for shape play including unitblocks, pattern blocks, mosaic tiles and jigsawpuzzles with different levels of challenge.• Teach strategies for solving shape and jigsawpuzzles, describing shape properties and modellingthe mathematical vocabulary such as *straight,**corner, edges.*• Play games focussing on the properties of shapes,such as hiding and partially revealing a shape,asking children to say what different shapes itcould be or not, and why. |