



Core Activity

Activity	Puzzles and shape sorters
Main Focus	Spatial awareness

Possibilities for additional maths learning	<input checked="" type="checkbox"/> Counting	<input type="checkbox"/> Composition	<input type="checkbox"/> Cardinality
	<input type="checkbox"/> Subitise	<input type="checkbox"/> Comparison	<input type="checkbox"/> Measure
	<input checked="" type="checkbox"/> Shape	<input checked="" type="checkbox"/> Pattern	<input type="checkbox"/> Spatial awareness

Activity Plan

Resources
<ul style="list-style-type: none"> ➤ Stacking cups. ➤ A variety of shape sorters. ➤ Threading puzzles of varying sizes – try making your own larger scale threading opportunities such as using cardboard tubes, string, pipe cleaners and resources to develop fine motor skills such as dried pasta to be threaded on string. ➤ A range of puzzles to support children developing ability. Children will progress from <ul style="list-style-type: none"> ○ Large pieces to small (some with knobs for little hands to grasp) ○ Three-dimensional to two-dimensional pieces ○ Few pieces to many pieces ○ Bold, clear images to intricate, detailed images.

Activity
<p>Children love to explore puzzles and begin to understand how different shapes fit together. Playing with puzzles helps build spatial awareness and reasoning skills. A child is required to determine which piece goes where and then manipulate the piece to get it into the shape. Puzzles help develop problem-solving skills and children will teach themselves through trial and adjustment. If your toddlers are exposed to all kinds of puzzles early on they will naturally learn how to do them and even more so with your support!</p> <p>Your main role is to observe and facilitate when needed alongside providing language to characterise the pieces by shape and describe what the child is doing e.g. talking about <i>round</i>, <i>straight</i> or <i>sticky-out bits</i>, <i>turning round</i> and <i>turning over</i>. You can show how a piece fits, or get children interested, by introducing a new puzzle and playing with them but then give children time and space to explore and investigate the puzzles.</p>

Inserting shapes into shape sorters and practicing shape naming with adults are among the first experiences that help children recognise and match shapes. Start your toddlers on simple shape sorters, play alongside them and comment on their problem solving. Shape toys that introduce geometric shapes to toddlers will develop the refinement of fine motor skills to make shapes fit into their correct places and reward toddlers for correct placement with sound or movement. Encourage children to keep trying even when they get a little frustrated e.g. by turning pieces round or over. Shape sorters are excellent for learning and children must have lots of experience of this first in order to be able to complete jigsaw puzzles.

Toddlers need to experience things on a concrete level in order to learn. Large, three-dimensional shapes are more developmentally appropriate for toddlers than small, flat puzzle pieces. This is important because toddlers can learn to fit pieces using both their sense of vision and touch, by looking at the shape and by feeling if it fits snugly in place. Use vocabulary to comment as you play alongside children such as 'below, in front of, next to, between'. Use shape names and shape properties, such as 'round, straight, curved, edge' and comment e.g. "we are looking for a square shape with corners".

Children can progress onto puzzles where the pieces are flatter (closer to two-dimensional) and instead of using standard shapes, the shape of the piece could be the outline of a picture and then puzzles where the entire picture is made up of multiple pieces which fit into the outline. These more complex puzzles are often done initially through trial-and-error until the child learns to spot the pieces more confidently by sight and match them with greater accuracy. Support children's emerging mathematical learning by asking questions and commenting e.g. "You only have two pieces left to fit!", "Where should you put the eyes?", "How many ducks are swimming in the lake?", "Let's find the piece with the other shoe so we have a pair." You could offer older children strategies, such as finding the corners and straight edges of a puzzle first.

Threading puzzles are another resource you can use which provides opportunity for children to develop fine motor control, hand and eye coordination, concentration and problem solving skills.

Extension Opportunities

- ✓ Make your own puzzles for children to explore such as handles, switches, bolts, locks secured onto a base.