| Key knowledge/skills/dispositions | Learning objectives | Activities |
| :---: | :---: | :---: |
| Match things by one attribute (i.e. according to colour, shape or size) | Match identical things | - Look for things that are the same in the classroom or during a neighbourhood walk. <br> - Play a card game to match picture cards that have the same objects. |
|  | Maths things by colour | - Play a matching game using unifix cubes to select and match cubes with the same colour. <br> - Play a lotto game to match by colour |
|  | Match things by shape | - Feel and find 2 blocks that have the same shape from a bag of pattern blocks. <br> - Search and match cut-outs by shape. |
|  | Match things by size | - Look for 2 buttons that are the same size from a collection of buttons. <br> - Play card games such as "Snap" to match picture cards which show objects of the same size. |
| Sort things by one attribute (i.e. according to colour, shape or size) | Sort two groups of objects | - Sort a collection of objects into 2 groups. |
|  | Sort things by colour | - Sort a bowl of assorted beans (e.g. red beans, green beans, soya beans, black beans) by colour. |
|  | Sort things by shape | - Make dough cookies in different shapes and sort them into different plates by shape. |
|  | Sort things by size | - Sort a basket of balls (e.g. ping pong balls, tennis balls and basket balls) by size. <br> - Sort a variety of spoons by size. |


| Compare things by one attribute (i.e. size or length) | Compare things by size | - Compare 2 similar objects such as a big ball and a small ball by using appropriate comparative vocabulary such as "bigger than" and "smaller than". |
| :---: | :---: | :---: |
|  | Compare things by length | - Play a comparison game using straws of different lengths and a selfmade die with words 'short' and 'long'. Throw the die and if the die indicates 'short', each child chooses a straw from his/her bundle. Both children will compare the straws that they have picked. The child with the shorter straw wins. |
| Put things in an order according to size or length and sequence events. | Put things in an order according to size (e.g. smallest to biggest, biggest to smallest) | - Compare and order different types of balls (e.g. a ping pong ball, a tennis ball, a basketball) by size. |
|  | Put things in an order according to length (e.g. shortest to longest, longest to shortest) | - Arrange a bundle of strings by length. |
|  | Put things in an order according to sequence of events | - Sequence the events in the story using picture cards. |
| Recognise, extend and create simple patterns (i.e. $A B$ pattern) | Recognise $A B$ patterns | - Go on a neighbourhood walk to observe and describe patterns in the environment such as tile patterns on walls and the floor and patterns on curbs. <br> - Identify $A B$ patterns on materials, such as ribbon, fabric or wrapping paper. |
|  | Recognise and extend $A B$ patterns | - Identify and extend $A B$ patterns using counters. - Identify and clap a simple and repetitive rhythm to accompany a song. |
|  | Recognise extend and create $A B$ patterns | - Use beads to create necklaces with an AB pattern. - Stand in a line and create a pattern using different movements such as hop and jump. |


| Use numbers in daily experiences |  |  |
| :---: | :---: | :---: |
| Key knowledge/skills/dispositions | Learning objectives | Activities |
| Rote count to at least 10 | Rote count from 1 to 5 | - Use number rhymes such as "1,2,3,4,5, Once I Caught A Fish Alive" and " 1,2 Buckle My Shoe" for children to recite the numbers in order. |
| Count reliably up to 10 things | Count reliably up to 5 things | Count 5 objects in a set: <br> - Provide several plates of 5 counters. Ask children to count the counters on each plate by moving the counters to an empty plate. This helps them keep track of what have been counted and what have not been counted. <br> - Place 1 counter in each box. This helps children focus on the concept of one-to one correspondence. <br> - Count 5 objects in picture cards where children can touch but not move them. <br> - Close the eyes and count counters/ objects being dropped into a tin by listening to the sounds. <br> Count 5 objects from a large collection of objects: <br> - Count and put 5 biscuits on a plate during snack time. <br> - Count and give 5 crayons to each friend. <br> - Sort links by colour and take 5 links from each group to make a bracelet. |
| Compare the quantities of 2 sets of things and use 'more', 'less/few' and 'same as' appropriately | Compare the quantities of 2 sets of things and use the word 'more' appropriately | - Pair the children and give each child a bag of counters and a paper plate. Each child grabs some counters from the bag and places them on the plate. Compare to see who has more counters on their plate. <br> - Place domino blocks facedown and flip over 2 of them to compare which block has more dots. |


|  |  | - After the children are able to compare and know which set has more or less counters, they can begin to determine the difference between 2 sets. Keep the difference between the 2 sets small (e.g. 1, 2 or 3 ). |
| :---: | :---: | :---: |
| Match number name/numeral/ number word to the quantity of a set of things (within 10) | Match number name ' 5 ' to the quantity of a set of things | - Say a number name (e.g. '5') and ask the children to give you a set of 5 counters. |
|  | Match numeral ' 5 ' to the quantity of a set of things | - Look for groups of objects and numeral '5’ in magazines or supermarket advertisements and create a Number Book on ' 5 '. |
|  | Match number word 'five' to the quantity of a set of things | - Match number word cards to groups of objects on the baseboard of a lotto game. |
| Recognise that the quantity of a set of things is the 'same' irrespective of the starting point of counting | Recognise sets of 5 objects | - Divide the class into small groups. Give each child a picture card which consists of 5 objects. Assign each child in the group different starting points to count and then get them to tell you the quantity. |
| Recognise that the quantity of $a$ set of things stays the same regardless of the arrangement | Identify sets of 5 objects in various arrangements | - Create different arrangements using pegs in varying quantities on the pegboard. Ask children to identify sets of 5 pegs. <br> - Prepare cards of various quantities in different arrangements. Ask children to pick cards that show 5 dots. Examples of 5 dots in different arrangements: |
| Recognise number (1to10) in numerals and in words | Recognise numeral ' 5 ' | - Conduct a number tour around the neighbourhood/within the pre-school centre to look for numeral ' 5 '. <br> - Provide some magazines and go on a number hunt for the numeral ' 5 '. <br> - Play a missing number game. Hide the numeral ' 5 ' card from a number line and ask children to identify the missing number. <br> - Do a number line-up using numeral cards. |

$\left.\begin{array}{|l|l|l|}\hline & \text { Recognise number word 'five' } & \begin{array}{l}\text { - Give children some number word cards. Call out a number name at a time and } \\ \text { children who are holding that number word card will stand up. }\end{array} \\ \hline \begin{array}{l}\text { Form numbers (1 to 10) in } \\ \text { numerals }\end{array} & \text { Form numeral '5' } & \text { - Form numeral '5' using play dough. } \\ \hline \begin{array}{l}\text { Name parts that form the whole in } \\ \text { quantity (e.g. } 2 \text { and } 3 \text { makes 5) }\end{array} & \text { Identify the parts that make 5 } & \begin{array}{l}\text { - Pair the children and give each of them a bag of } 5 \text { cubes. One child will take some cubes from } \\ \text { his bag and the other child will have to take the correct number of cubes from his own bag to } \\ \text { make 5. }\end{array} \\ \text { - Tell a number story using objects such as cars and a counting board to represent the setting } \\ \text { for the story such as a scene of a road. For example, } 2 \text { green cars are on the road. } 3 \text { red cars } \\ \text { are on the road. There are } 5 \text { cars on the road. }\end{array}\right\}$

| Recognise and use basic shapes and simple spatial concepts in daily experiences |  |  |
| :---: | :---: | :---: |
| Key knowledge/skills/dispositions | Learning objectives | Activities |
| Recognise the four basic shapes (i.e. circle, square, rectangle and triangle) | Recognise and name the shape (i.e. square) | - Go for a neighbourhood walk and ask children to identify things that are square in shape. <br> - Search magazines and newspaper for pictures of things that are square in shape. Cut and glue them on papers to make a book about squares. |
|  | Recognise and name the shape (i.e. squares in different sizes) | - Identify all the square blocks of different sizes from a bag of pattern blocks. |
|  | Recognise and name the shape (i.e. squares in different orientations) | - Get children to rotate a square pattern block on the paper and trace its outline. Guide them to make a few rotations and trace the outlines. Encourage them to compare the outlines with a friend and talk about how they are created. |
| Use basic shapes to form other figures (e.g. use two squares and a triangle to form a boat) | Use basic shapes (i.e. squares) to form other figures | - Use pattern blocks to form other figures such as two triangles to form a square or rectangle. <br> - Form a figure by placing small coloured square pieces of paper on a piece of drawing paper. |
|  | Use basic shapes to form a figure | - Use pattern blocks to create figures on a piece of plain paper and trace the figures. |

Name position (i.e. top/bottom, in front of/ behind), direction (i.e. up/down, left/right) and distance (i.e. far/ near)

- Go on a treasure hunt with the children using positional words. For example, "Open the box on the top shelf. Look for the tower of interlocking bricks at the bottom of the box."

