

MATHEMATICS: Numbers		
	What a child is learning	What adults could do and/or provide
Birth – 11 months	<ul style="list-style-type: none"> • Notices changes in number of objects/images or sounds in group of up to 3. 	Clapping action, simple actions like counting, dancing, clapping, tapping to music.
8 – 20 months	<ul style="list-style-type: none"> • Develops an awareness of number names through their enjoyment of action rhymes and songs that relate to their experience of numbers. • Has some understanding that things exist, even when out of sight 	<p>Singing Nursery Rhymes with props, puppets/finger puppets.</p> <p>Hanging themed mobiles, taking objects away counting with them, hide and seek games.</p> <p>Counting as showing the objects from the box.</p> <p>Collecting sticks, stones, feathers, objects of the woodland counting as they go.</p>
16 – 26 months	<ul style="list-style-type: none"> • Knows that things exist, even when out of sight. • Beginning to organise and categorise objects, e.g. putting all the teddy bears together or teddies and cars in separate piles. • Says some counting words randomly. 	<p>Number songs and acting out</p> <p>Numbers in different languages</p> <p>Water play</p> <p>Role-play hibernation, counting the animals that are going to sleep incorporating songs.</p> <p>Introduce lots and few within play.</p> <p>Guessing the objects under the blanket.</p> <p>Encouraging sorting toys at tidy up time, labelled boxes so children know where to put it back-visual with word labels.</p> <p>Making 1-1 correspondence giving each animal rabbit, squirrel a home.</p>
22 – 36 months	<ul style="list-style-type: none"> • Selects a small number of objects from a group when asked, for example, <i>'please give me one'</i>, <i>'please give me two'</i>. • Recites some number names in sequence. • Creates and experiments with symbols and marks representing ideas of number. • Begins to make comparisons between quantities. • Uses some language of quantities, such as <i>'more'</i> and <i>'a lot'</i>. • Knows that a group of things changes in quantity when something is added or taken away. 	<p>Rolling big dice, number to correspond to number of actions</p> <p>Hiding objects</p> <p>Turnip- planting the seeds, counting, digging</p> <p>Bonfire</p> <p>Goldilocks, Three bears- small, medium, large</p> <p>How many ore do we need?</p> <p>Sharing and tasting festival food, selecting number of objects of a group.</p> <p>Number songs, adding and taking away examples "On bonfire night at 5 o'clock..."</p> <p>Introduce more and a lot.</p>
30 – 50 months	<ul style="list-style-type: none"> • Uses some number names and number language spontaneously. • Uses some number names accurately in play. • Recites numbers in order to 10. • Knows that numbers identify how many objects are in a set. • Beginning to represent numbers using fingers, marks on paper r pictures. • Sometimes matches numeral and quantity correctly. 	<p>Number the cups, put relevant number of objects in the cup-</p> <p>correspond the correct number of the cup to the objects</p> <p>Bonfire night- count sticks, recognise the numerals</p> <p>PE- counting the steps, claps, jumps</p>

	<ul style="list-style-type: none"> • Shows curiosity about numbers by offering comments or asking questions. • Compares two groups of objects, saying when they have the same number. • Shows an interest in number problems. • Separates a group of three or four objects in different ways, beginning to recognise that the total is still the same. • Shows an interest in numerals in the environment. • Shows an interest in representing numbers. • Realises not only objects, but anything can be counted, including steps, claps or jumps. 	<p>Tactile tray with shaving foam, baby lotion, flour, sand with numbers to encourage mark making and patterns to recreate.</p> <p>Money in role play situations, farmer's market, firework shop, green grocers and other jobs.</p> <p>Introducing a mud kitchen, recipe sheets for mud pies, shakes</p> <p>Number bikes, scooters with children. Make numbered parking bays.</p> <p>Using maps for Learning Through Nature.</p>
<p>40 – 60 months</p>	<ul style="list-style-type: none"> • Recognise some numerals of personal significance. • Recognises numerals 1 to 5. • Counts up to three or four objects by saying one number name for each item. • Counts actions or objects which cannot be moved. • Counts objects to 10, and beginning to count beyond 10. • Counts out up to six objects from a larger group. • Selects the correct numeral to represent 1 to 5, then 1 to 10 objects. • Counts an irregular arrangement of up to ten objects. • Estimates how many objects they can see and checks by counting them. • Uses the language of 'more' and 'fewer' to compare two sets of objects. • Finds the total number of items in two groups by counting all of them. • Says the number that is one more than a given number. • Finds one more or one less from a group of up to five objects, then ten objects. • In practical activities and discussion, beginning to use the vocabulary involved in adding and subtracting. • Records, using marks that they can interpret and explain. • Begins to identify own mathematical problems based on own interests and fascinations. <p>Early Learning Goal Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing.</p>	<p>Snack- how many children. How many cups, how many more we need, set up the tables</p> <p>Ingredient follow the recipe- Ginger Bread Man</p> <p>Grandmas footprints- count the footsteps</p> <p>Hopscotch games</p> <p>Measuring the heights</p> <p>Line up in the high order</p> <p>Hide numbers in the sand</p> <p>Stencils with the numbers, trace them</p> <p>Making numbers and labels with the children for the garden.</p> <p>Number the steps in garden.</p> <p>Number buckets and spades for the outdoor sand pit.</p> <p>Changeable number line for gardens.</p> <p>Displays to include numbers example 3 Billy Goats Gruff, 3 Little Pigs, 3 Bears.</p> <p>Counting vegetables, sorting, creating labels.</p> <p>Matching basket contents to laminated picture card.</p> <p>Making own games, encouraging garden games 'what's the time Mr Wolf?' 'Hide and Seek'.</p> <p>Make up own story problems for each other to solve to extend where possible "How can we share 6 apples between Sarah and Sumina?.</p> <p>Making shopping lists, total quantity of food.</p>

MATHEMATICS: Shape, space and measure		
	What a child is learning	What adults could do and/or provide
Birth – 11 months	<p><i>Babies' early awareness of shape, space and measure grows from their sensory awareness and opportunities to observe objects and their movements, and to play and explore.</i></p> <p>See Characteristics of Effective Learning - Playing and Exploring and Physical Development</p>	<p>Touchy feely objects</p> <p>Shape based treasure baskets</p> <p>Hanging mobiles with different shapes</p> <p>Sensory boxes, trays e.g. pasta, dinosaurs- link to the story</p>
8 – 20 months	<ul style="list-style-type: none"> • Recognises big things and small things in meaningful contexts. • Gets to know and enjoy daily routines, such as getting-up time, mealtimes, nappy time, and bedtime. 	<p>Goldilocks- small, bowl, big bowl</p> <p>Enormous turnip- small, that grows to big</p> <p>Giving opportunities for big and small objects, big and small stories and heavy and light objects in a treasure basket.</p> <p>Objects made available to change shape, sponges, play dough, and bubbles exploring changes of shapes.</p> <p>Provide visual time table to show routine and a routine book.</p>
16 – 26 months	<ul style="list-style-type: none"> • Attempts, sometimes successfully, to fit shapes into spaces on inset boards or jigsaw puzzles. • Uses blocks to create their own simple structures and arrangements. • Enjoys filling and emptying containers. • Associates a sequence of actions with daily routines. • Beginning to understand that things might happen 'now'. 	<p>Tidy up time- develop routine</p> <p>What happens next- make a prediction</p> <p>We are going on the Bear hunt</p> <p>Place the objects in the shape sorter</p> <p>Create different shapes when building the blocks, track</p> <p>Opportunities for different size, shape and colour bottles for sand and water 'empty and full'.</p> <p>Introducing the 'tidy up song'.</p> <p>Puzzles and Floor puzzles.</p>
22 – 36 months	<ul style="list-style-type: none"> • Notices simple shapes and patterns in pictures. • Beginning to categorise objects according to properties such as shape or size. • Begins to use the language of size. • Understands some talk about immediate past and future, e.g. 'before', 'later' or 'soon'. • Anticipates specific time-based events such as mealtimes or home time 	<p>Draw around the body, feet, hands- say which one is bigger, smaller</p> <p>Balancing scales, weights- water, sand, different toy linked to the books</p> <p>Expand on the mathematical vocabulary</p> <p>Sand timers- turn taking</p> <p>Make predictions using the visual timetable</p> <p>Introducing rich new vocabulary for size, massive, homogenous, gigantic, miniature, tiny.</p> <p>Before and Later board next to visual timetable pictures of what will be happening, snack 1st garden 2nd. Show a list of pictures, ask the children to anticipate what will happen next?</p> <p>Providing different materials to weigh, feathers, cotton wool, sand, rocks, rice, pasta. Bigger doesn't always mean heavier.</p> <p>Measuring length using non-standard units, sticks, hands, ties.</p> <p>Large scale chalking of patterns in garden.</p>

<p>30 – 50 months</p>	<ul style="list-style-type: none"> • Shows an interest in shape and space by playing with shapes or making arrangements with objects. • Shows awareness of similarities of shapes in the environment. • Uses positional language. • Shows interest in shape by sustained construction activity or by talking about shapes or arrangements. • Shows interest in shapes in the environment. • Uses shapes appropriately for tasks. • Beginning to talk about the shapes of everyday objects, e.g. 'round' and 'tall'. 	<p>Jolly Postman- make postcards, draw on the box and post them Parents to bring objects from home that is e.g, sphere, cylinder Weighing when cooking Christmas goodies, winter soups Use of the light box for drawing the shapes Show objects and describe the shapes Patterns- mirror the image Games involving positional language, decorating tree arranging presents. The Shape Song- You tube Identify different shapes on the garden e.g what is square shape Wrapping presents, role play post office, weighing present, buying stamp. Size of present, measure paper needed. Creating story maps, talking about distances and giving directions.</p>
<p>40 – 60 months</p>	<ul style="list-style-type: none"> • Beginning to use mathematical names for 'solid' 3D shapes and 'flat' 2D shapes, and mathematical terms to describe shapes. • Selects a particular named shape. • Can describe their relative position such as 'behind' or 'next to'. • Orders two or three items by length or height. • Orders two items by weight or capacity. • Uses familiar objects and common shapes to create and recreate patterns and build models. • Uses everyday language related to time. • Beginning to use everyday language related to money. • Orders and sequences familiar events. • Measures short periods of time in simple ways. <p>Early Learning Goal Children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems. They recognise, create and describe patterns. They explore characteristics of everyday objects and shapes and use mathematical language to describe them.</p>	<p>Patterns- next one in the sequence is.... Make books about shapes and size. Create a cooking station and cookery books with step by step visual guidance. Two part sequence- follow instruction Follow the recipe PE- measure the distance Maths language related to time- introduce minutes, hours Treasure map- hide objects linked to the book Giving and following instructions when creating junk modelling following visual images. Ordering collected objects by length, size. Games with lego bricks- e.g.put the yellow brick next to the red, on top of the blue Making rockets for fireworks junk modelling providing different size resources. Finding hidden objects in the garden using a map.</p>