

## Appendix 1 - Counting Activities

| <b>Environment</b>              | <b>Concept / Skill</b>   | <b>Context</b>  |
|---------------------------------|--|---|
| Circle time                     | <ul style="list-style-type: none"> <li>• Stable order counting</li> <li>• Count how many</li> <li>• Show given number, e.g. of fingers</li> </ul>                                  | <ul style="list-style-type: none"> <li>• Counting stories</li> <li>• Number action rhymes</li> <li>• Acting out a story: dressing up; using puppets</li> </ul>  |
| Daily routines                  | <ul style="list-style-type: none"> <li>• Count how many</li> <li>• Count out a given quantity</li> </ul>   | <ul style="list-style-type: none"> <li>• Taking the register</li> <li>• Counting the group</li> <li>• Counting out snacks, drinks</li> <li>• Counting out / away, e.g. paintbrushes, scissors</li> <li>• Counting out how many can work in the sand, water....</li> </ul>   |
| Art and craft areas             | <ul style="list-style-type: none"> <li>• Count by touching and partitioning</li> <li>• Count pictures</li> <li>• Compare quantities</li> </ul>                                     | <ul style="list-style-type: none"> <li>• Counting how many, to make a collage: pieces of scrap paper, pasta shells, shiny things...</li> <li>• Sticking pictures cut from a catalogue: counting how many...</li> <li>• Painting a picture: counting how many...</li> <li>• Making dough models: counting how many models, two eyes, four legs...; which has more legs...</li> </ul> |
| Table top games and collections | <ul style="list-style-type: none"> <li>• Count by touching and partitioning</li> <li>• Use subitising* skills to recognise how many</li> <li>• Count physical movements</li> </ul> | <ul style="list-style-type: none"> <li>• Counting how many: beads on a lace, pegs on a peg board</li> <li>• Recognising quantities: playing number snap, lotto</li> <li>• Counting along a track: board games with dice</li> </ul>  |
| Sand and water                  | <ul style="list-style-type: none"> <li>• Count out a given quantity</li> <li>• Count how many</li> <li>• Compare quantities</li> </ul>   | <ul style="list-style-type: none"> <li>• Making three, four sand pies</li> <li>• Putting four cups of water in the water wheel</li> <li>• Are there enough flags for one for each sand pie?</li> <li>• Are there enough captains for one for each boat?</li> </ul>  |
| Construction                    | <ul style="list-style-type: none"> <li>• Counting out a given quantity</li> <li>• Count how many</li> <li>• Compare quantities</li> <li>• Making two groups the same</li> </ul>    | <ul style="list-style-type: none"> <li>• Making a tower with five bricks</li> <li>• Counting how many big blocks to make a road</li> <li>• Comparing two towers, which has more?</li> <li>• This tower has more; make that one have the same number of bricks</li> </ul>  |
| Role play                       | <ul style="list-style-type: none"> <li>• Count out a given quantity</li> <li>• Count how many</li> <li>• Compare quantities</li> </ul>   | <ul style="list-style-type: none"> <li>• Dressing up: role playing, e.g. The Three Bears: chairs, beds porridge</li> <li>• Shopping, playing customer / shopkeeper roles: counting out coins</li> <li>• Preparing food in the home area: counting out enough plates for four guests</li> </ul>  |
| Small world                     | <ul style="list-style-type: none"> <li>• Count out a given quantity</li> <li>• Count how many</li> <li>• Compare quantities</li> </ul>   | <ul style="list-style-type: none"> <li>• Doll's house: putting three people in the kitchen; two in the bedroom...</li> <li>• Road floor plan: counting how many cars on this road; how many lorries...</li> <li>• Are there enough people to fill the seats in this car?</li> <li>• Are there enough chairs for all the people in the doll's house?</li> </ul>                      |
| Outside play                    | <ul style="list-style-type: none"> <li>• Count how many</li> <li>• Compare quantities</li> </ul>   | <ul style="list-style-type: none"> <li>• Playing skittles: how many did you knock down?</li> <li>• Who can collect more conkers than this?</li> <li>• Sequences: two steps, one jump...</li> <li>• Counting three balls to put in the truck to take over there</li> </ul>   |

## Number Activities

| <b>Environment</b>              | <b>Concept / Skill</b>  | <b>Context</b>  |
|---------------------------------|---|---|
| Circle time                     | <ul style="list-style-type: none"> <li>Ordering</li> <li>Naming larger numbers</li> </ul>   | <ul style="list-style-type: none"> <li>People maths with numeral cards: who should stand between one and two? Next number after two?</li> <li>Discussing house numbers, ages of older siblings, bus numbers</li> <li>Songs and rhymes: singing number rhymes with larger numbers</li> </ul> |
| Daily routines                  | <ul style="list-style-type: none"> <li>Estimating how many</li> <li>Making fair shares</li> <li>Recognising some numerals</li> </ul>    | <ul style="list-style-type: none"> <li>Snack time: are there enough apples for everyone? Sharing orange segments</li> <li>Does everyone have the same amount?</li> <li>Recognising numerals on a display '4 can play in the sand</li> </ul>   |
| Art and craft areas             | <ul style="list-style-type: none"> <li>Making fair shares</li> <li>Using fraction language</li> <li>Recording numbers</li> </ul>        | <ul style="list-style-type: none"> <li>Sharing out sequins for collage: does everyone have the same amount?</li> <li>Clay: cutting the sausage in half</li> <li>Painting flowers: painting a numeral to show how many flowers</li> </ul>  |
| Table top games and collections | <ul style="list-style-type: none"> <li>Ordering</li> <li>Estimating how many</li> <li>Naming numerals</li> </ul>                        | <ul style="list-style-type: none"> <li>Card games: ordering numeral cards, quantity cards</li> <li>Dominos: estimating how many spots / pictures</li> <li>Numerals: reading numbers on dice / cards</li> </ul>  |
| Sand and water                  | <ul style="list-style-type: none"> <li>Using number language including zero</li> </ul>  | <ul style="list-style-type: none"> <li>Emptying sand: counting how many cupfuls; using language of zero for nothing left</li> </ul>   |
| Construction                    | <ul style="list-style-type: none"> <li>Counting one more/fewer</li> </ul>   | <ul style="list-style-type: none"> <li>Block play: how many? And one more / fewer?</li> </ul>   |
| Role play                       | <ul style="list-style-type: none"> <li>Adding and subtracting</li> <li>Using larger numbers</li> <li>Using fraction language</li> </ul> | <ul style="list-style-type: none"> <li>Home area: two dolls and teddy in the cot: how many altogether? Teddy out of cot: how many now?</li> <li>Telephone: dialling telephone numbers</li> <li>Shop prices: how much does it cost?</li> <li>Sharing out food: half each</li> </ul>          |
| Small world                     | <ul style="list-style-type: none"> <li>Adding and subtracting small quantities</li> </ul>   | <ul style="list-style-type: none"> <li>Farm; how many cows? And one more / fewer?</li> <li>Garage: putting some cars by the petrol pumps; and one more / fewer?</li> </ul>  |
| Outside play                    | <ul style="list-style-type: none"> <li>Counting one more/fewer</li> </ul>   | <ul style="list-style-type: none"> <li>Playing skittles: how many did you knock down? and one more?</li> <li>Climbing frame: how many at the top? Jamie has come down, how many now?</li> </ul>   |

## Pattern Activities

| <b>Environment</b>              | <b>Concept / Skill</b>   | <b>Context</b>   |
|---------------------------------|--|--|
| Circle time                     | <ul style="list-style-type: none"> <li>• Copy a sequence</li> <li>• Copy a pattern</li> <li>• Create a sequence or pattern</li> <li>• Recognise a cyclical pattern</li> </ul>                          | <ul style="list-style-type: none"> <li>• Singing songs with repeats</li> <li>• Playing percussion accompaniments</li> <li>• Composing rhythms and tunes and recording them for playback</li> <li>• Reciting order of the days of the week</li> </ul> |
| Art and craft areas             | <ul style="list-style-type: none"> <li>• Copy a sequence</li> <li>• Create line patterns</li> <li>• Create a sequence</li> <li>• Create a pattern</li> <li>• Describe a sequence or pattern</li> </ul> | <ul style="list-style-type: none"> <li>• Making sequences and patterns by: painting, printing, drawing, cutting and sticking</li> <li>• Starting sequences for others to copy or continue</li> </ul>   |
| Table top games and collections | <ul style="list-style-type: none"> <li>• Copy a sequence</li> <li>• Create line patterns</li> <li>• Create a sequence</li> <li>• Create a pattern</li> <li>• Describe a sequence or pattern</li> </ul> | <ul style="list-style-type: none"> <li>• Using collections to make sequences and patterns: pegs and pegboards, beads and laces, buttons, sorting toys, mosaic tiles, magnetic tiles/shapes</li> </ul>  |
| Sand and water                  | <ul style="list-style-type: none"> <li>• Create a sequence or pattern</li> <li>• Describe a sequence or pattern</li> </ul>   | <ul style="list-style-type: none"> <li>• Making patterns of sand pies in the damp sand</li> <li>• Using sticks, rakes, combs, shells, imprints to make sequences and patterns</li> </ul>   |
| Construction                    | <ul style="list-style-type: none"> <li>• Copy a sequence</li> <li>• Create line patterns</li> <li>• Create a sequence</li> <li>• Create a pattern</li> <li>• Describe a sequence or pattern</li> </ul> | <ul style="list-style-type: none"> <li>• Choosing construction pieces to copy a sequence or pattern</li> <li>• Making patterns with construction pieces</li> <li>• Making structures with a pattern in their design</li> </ul>                       |
| Block Play                      | <ul style="list-style-type: none"> <li>• Copy a sequence</li> <li>• Create line patterns</li> <li>• Create a sequence</li> <li>• Create a pattern</li> <li>• Describe a sequence or pattern</li> </ul> | <ul style="list-style-type: none"> <li>• Choosing blocks to copy a sequence or pattern</li> <li>• Making a sequence or pattern using at least two different types of block</li> <li>• Making structures with a pattern in their design</li> </ul>    |
| Role play                       | <ul style="list-style-type: none"> <li>• Describe a sequence or pattern</li> <li>• Complete a cyclical pattern</li> </ul>  | <ul style="list-style-type: none"> <li>• Describing fabrics, wallpapers in the home area</li> <li>• Dressing up: choosing a necklace with complete cyclical pattern</li> </ul>   |
| Small world                     | <ul style="list-style-type: none"> <li>• Create a sequence or pattern</li> <li>• Describe a sequence or pattern</li> </ul>   | <ul style="list-style-type: none"> <li>• Putting cars in straight lines of alternating blue/red/blue/red...</li> <li>• Lining up the animals to go into the farm.... cow then pig then horse, cow then pig then horse</li> </ul>                     |
| Outside play                    | <ul style="list-style-type: none"> <li>• Recognise a cyclical pattern</li> </ul>   | <ul style="list-style-type: none"> <li>• Helping to grow plants in the garden: observe the cycle of planting, growing, dying, planting.....</li> </ul>   |
| Cooking                         | <ul style="list-style-type: none"> <li>• Create line patterns</li> </ul>   | <ul style="list-style-type: none"> <li>• Icing cakes and biscuits with lines</li> </ul>  |
| Information Technology          | <ul style="list-style-type: none"> <li>• Copy a sequence</li> <li>• Create line patterns</li> <li>• Create a sequence</li> <li>• Create a pattern</li> <li>• Describe a sequence or pattern</li> </ul> | <ul style="list-style-type: none"> <li>• Using art software to copy sequences and patterns</li> <li>• Using art software to create sequences and patterns</li> </ul>   |

## Shape and Space Activities

| <b>Environment</b>              | <b>Concept / Skill</b>  | <b>Context</b>  |
|---------------------------------|---|---|
| Circle time                     | <ul style="list-style-type: none"> <li>Explore line shapes or patterns</li> </ul>   | <ul style="list-style-type: none"> <li>Playing traditional nursery games e.g. Farmer's in his den.</li> </ul>   |
| Art and craft areas             | <ul style="list-style-type: none"> <li>Sort by shape</li> <li>Explore symmetry</li> <li>Fit together, take apart</li> <li>Explore line shapes and patterns</li> <li>Explore properties of 2D shapes</li> <li>Interpret pictorial representations of spatial relationships</li> </ul>                            | <ul style="list-style-type: none"> <li>Choosing printing block / sponge to produce shape</li> <li>Choosing item to print particular line</li> <li>Making symmetrical blot and fold pattern</li> <li>Making and reshaping dough models</li> <li>Taking apart and remaking cardboard boxes</li> <li>Folding sheets of paper</li> <li>Making line patterns by drawing, painting, printing</li> <li>Making pictures and patterns by painting, drawing, printing, collage</li> <li>Making pictures of real objects</li> </ul>        |
| Table top games and collections | <ul style="list-style-type: none"> <li>Explore symmetry</li> <li>Fit together, take apart</li> <li>Explore properties of 2D shapes</li> </ul>   | <ul style="list-style-type: none"> <li>Making jigsaws</li> <li>Making pictures and patterns with shape tiles</li> <li>Threading and changing beads, making and changing 'poppet' necklaces</li> <li>Using shape posting boxes</li> </ul>  |
| Sand play                       | <ul style="list-style-type: none"> <li>Sort by shape</li> <li>Explore line shapes and patterns</li> <li>Explore properties of 2D shapes</li> </ul>  | <ul style="list-style-type: none"> <li>Sorting sand play items by shape</li> <li>Making line patterns in the sand</li> <li>Making shape outline patterns in the sand</li> </ul>   |
| Construction                    | <ul style="list-style-type: none"> <li>Sort by shape: same and different</li> <li>Sort by properties of shape</li> <li>Interpret pictorial representations of spatial relationships</li> <li>Fit together, take apart</li> </ul>  | <ul style="list-style-type: none"> <li>Choosing construction pieces by shape</li> <li>Choosing construction pieces by property of shape, e.g. curved.</li> <li>Exploring which pieces make strong structures</li> <li>Making a model, taking it apart and remaking it in a different shape</li> <li>Making a drawn plan for a model</li> <li>Using a drawing / picture to make a model</li> <li>Drawing a picture of a model</li> </ul>   |
| Block play                      | <ul style="list-style-type: none"> <li>Sort by shape: same and different</li> <li>Sort by properties of shape</li> <li>Interpret pictorial representations of spatial relationships</li> <li>Fit together, take apart</li> <li>Explore properties of shape</li> <li>Explore line shapes and patterns</li> </ul> | <ul style="list-style-type: none"> <li>Choosing construction pieces by shape</li> <li>Choosing construction pieces by property of shape, e.g. curved.</li> <li>Exploring which pieces make strong structures</li> <li>Making a model, taking it apart and remaking it in a different shape</li> <li>Running items down a ramp</li> <li>Masking lines of blocks: straight, turn....</li> <li>Making a drawn plan for a model</li> <li>Using a drawing / picture to make a model</li> <li>Drawing a picture of a model</li> </ul> |
| Role play                       | <ul style="list-style-type: none"> <li>Sort by colour, texture</li> <li>Explore reflection</li> <li>Explore properties of shapes</li> <li>Explore position and movement</li> </ul>  | <ul style="list-style-type: none"> <li>Choosing dressing up clothes by shape and size</li> <li>Choosing jewellery by shape of beads</li> <li>Observing reflection in the mirror</li> <li>Using a mirror to put on face paints</li> <li>Folding blankets, sheets, tablecloths</li> <li>Moving furniture and goods to rearrange the shop/café/kitchen</li> </ul>  |

|                        |  |  |
|------------------------|--|--|
| Small world            | <ul style="list-style-type: none"> <li>• Explore position and movement</li> </ul>  | <ul style="list-style-type: none"> <li>• Moving dolls and furniture in the doll's house/boats on the sea/cars on the road....</li> </ul>   |
| Outside play           | <ul style="list-style-type: none"> <li>• Explore properties of shapes</li> <li>• Explore line shapes and patterns</li> <li>• Explore position and movement</li> </ul>  | <ul style="list-style-type: none"> <li>• Throwing and rolling balls, hoops, quoits.....</li> <li>• Playing traditional movement games e.g. Hokey Cokey</li> <li>• Climbing /swinging from apparatus</li> <li>• Moving in trucks and tricycles</li> <li>• Moving toys using trucks</li> </ul> |
| Cooking                | <ul style="list-style-type: none"> <li>• Explore spatial properties</li> </ul>   | <ul style="list-style-type: none"> <li>• Making cakes and biscuits in different shapes</li> <li>• Cutting out pastry and biscuit dough using various shaped cutters</li> <li>• Decorating cakes with different shaped items</li> </ul>   |
| Information Technology | <ul style="list-style-type: none"> <li>• Explore 2D shapes and their properties</li> <li>• Explore line shapes and patterns</li> <li>• Interpret pictorial representations of spatial relationships</li> </ul> | <ul style="list-style-type: none"> <li>• Using an art software package to draw lines shapes</li> <li>• Making Roamer/pip/pixie travel in a straight line/turn</li> <li>• Using a pen adapter with Roamer and observing Roamer's path</li> </ul>  |

## Measure Activities

| Environment                     | Concept / Skill   | Context  |
|---------------------------------|---|--|
| Circle time                     | <ul style="list-style-type: none"> <li>Compare and order heights</li> <li>recognise changes of tempo</li> <li>sequence days of the week</li> </ul>    | <ul style="list-style-type: none"> <li>Playing lining up games: ordering heights</li> <li>Singing songs, playing instruments: slowly, faster</li> <li>Changing the calendar saying what day is it today, tomorrow.....</li> </ul>  |
| Art and craft areas             | <ul style="list-style-type: none"> <li>Compare and order lengths, widths, sizes, areas</li> </ul>   | <ul style="list-style-type: none"> <li>Making dough models: making a longer, fatter, wider worm</li> <li>Painting wider, shorter lines</li> <li>Covering a box with paper</li> <li>Making models larger, smaller, taller.....</li> </ul>   |
| Table top games and collections | <ul style="list-style-type: none"> <li>Compare volumes, capacities</li> <li>Compare timing devices</li> </ul>   | <ul style="list-style-type: none"> <li>Fitting beads, buttons, cotton reels, shells into boxes</li> <li>Ordering nesting and stacking toys</li> <li>Using sand, water, rocker timers</li> </ul>  |
| Sand and water                  | <ul style="list-style-type: none"> <li>Compare and order volumes and capacities</li> <li>Explore balancing</li> <li>Explore rates of speed</li> </ul> | <ul style="list-style-type: none"> <li>Making sand pies in size order</li> <li>Filling and pouring sand and water; estimating</li> <li>How many cups can be filled from a container?</li> <li>Using a colander to separate larger items from sand</li> <li>Using a bucket balance with sand or water</li> <li>Watching how quickly water pours through tubing; making it go faster or more slowly</li> </ul> |
| Construction                    | <ul style="list-style-type: none"> <li>Compare and order length</li> <li>Explore rates of speed</li> </ul>  | <ul style="list-style-type: none"> <li>Making models: comparing to find longer, shorter, taller.....</li> <li>Running cars down slopes</li> <li>Finding who finishes building their tower first</li> <li>Using a timing device when making a model</li> <li>Taking apart old clocks; turning the hands; as part of a clock repair shop</li> </ul>  |
| Block Play                      | <ul style="list-style-type: none"> <li>Compare and order length</li> </ul>  | <ul style="list-style-type: none"> <li>Making models: estimating which pieces will fit; making a roadway longer, shorter, wider, to go from the cupboard to the door.....</li> </ul>   |
| Role play                       | <ul style="list-style-type: none"> <li>Compare and order length, weight, capacity and sizes</li> <li>Use the language of time</li> </ul>              | <ul style="list-style-type: none"> <li>Dressing up: wearing a longer, shorter dress, scarf, smaller shoes, longer cloak</li> <li>Sharing out drinks in the café</li> <li>Weighing the dolls at the chemist</li> <li>Using a clock in the home area</li> </ul>  |
| Small world                     | <ul style="list-style-type: none"> <li>Compare and order sizes</li> </ul>   | <ul style="list-style-type: none"> <li>Ordering play people by height</li> <li>Ordering the cars by length</li> <li>Putting all the small animals in one field and the large animals in another field</li> </ul>   |
| Outside play                    | <ul style="list-style-type: none"> <li>Explore rates of speed</li> <li>Comparing lengths, weights and sizes</li> </ul>                                | <ul style="list-style-type: none"> <li>Using moving toys and vehicles to move more slowly, more quickly</li> <li>Running races, finding who finished first</li> <li>Weighing and comparing collections of sticks, stones, fir cones, leaves.....</li> </ul>  |
| Cooking                         | <ul style="list-style-type: none"> <li>Exploring weighing and pouring</li> </ul>  | <ul style="list-style-type: none"> <li>Weighing out ingredients</li> <li>Balancing ingredients</li> <li>Pouring out spoonfuls, jugfuls</li> </ul>  |
| Information Technology          | <ul style="list-style-type: none"> <li>Compare and order lengths</li> </ul>   | <ul style="list-style-type: none"> <li>Using art software to draw larger, smaller, longer, wider lines and pictures</li> </ul>   |
| Music Table                     | <ul style="list-style-type: none"> <li>Use different tempos</li> </ul>  | <ul style="list-style-type: none"> <li>Playing instruments slowly, quickly, getting faster, getting slower</li> </ul>  |

subitise\* - instantly recognise a small quantity, between one and four, without appearing to count how many.

