

**The Sue Hedley Nursery School**

**Curriculum Sequence**

**Mathematics**

Mathematics is a specific area of the Early Years Foundation Stage curriculum.

The Sue Hedley Nursery School practises the HighScope Philosophy across all areas of learning incorporating the Birth to 5 Matters, this is how it looks within Mathematics.

We know that children start developing an understanding of mathematical concepts from an early age. This happens through opportunities that occur in everyday life. This means that mathematics is everywhere. We aim to provide an engaging environment that facilitates these opportunities through open-ended play. Our practitioners are skilled at ensuring opportunities are maximised through thoughtful interactions with the children.

Our High Scope philosophy focuses on our children as active learners. Young children need to be active. They base all their growing knowledge, understanding and skills on real experiences, by using real materials and through sharing their discoveries with others.

We believe mathematics in the early years should be real, hands-on and multisensory. Children develop their mathematical thinking when they can touch, feel and manipulate concrete resources. In our nursery mathematical skills are taught through meaningful contexts.

**Curriculum Sequence**

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| **Mathematics: Number** | | |
|  | **Our Sequence of Learning** | **Our Unique Approach** |
| “I am a keen explorer”  ***Two Year Old end point***  ***…………………………………***  ***Vocabulary:***  ***Number names 1-5***  ***Count***  ***How many?*** | * I can take one or two objects from a group. * I can say number names in my play, sometimes counting in order. * I am beginning to count using my fingers * I notice numerals in the environment. * I enjoy joining in with number rhymes, songs and chants. | * Adults model counting at every opportunity during work time and group e.g. counting the children to see how many are here? How many want milk/water? How many cars/animals/balls? * There are lots of opportunities to explore objects in a range of quantities throughout the environment. * Number songs and rhymes are part of the everyday routine and circle time. Practitioners make this practical by using props and puppies and involving the children themselves. |
| “I am active and curious”  ***Nursery One end point***  ***…………………………….***  ***Vocabulary:***  ***Number names 0-10***  ***more, less, the same***  ***all together***  ***one more/less*** | * I can compare two sets of objects and say when they are the same. * I am beginning to count in order to ten. (rote counting) * I am beginning to understand one-to-one correspondence. * I am beginning to recognise numerals 0-10. * I can match numerals and amounts up to 5. * I can subitise amounts of one, two or three objects. * I can use my understanding of numbers to solve problems in my play. * I use a range of my own marks to represent numbers. | * Each day the children are involved in counting and recording the numbers for snack during welcome time. * Adults model counting and comparing actual objects and talk about the skills involved when doing so. * We provide materials to explore one-to-one correspondence. * We provide a numeral rich environment where children see numbers in meaningful contexts. * Practitioners model writing numbers on a regular basis and for a meaningful purpose. * Children are introduced to games using regular and irregular number patterns i.e. dice during small group time. * Children use planning strategies involving different numerals and quantities. * Practitioners encourage and model how to problem solve through sharing of resources. * A range of stories are read to the children that have a mathematical focus and number songs are used daily. |
| “I am capable and confident”  ***Nursery Two end point***  ***………………………………….***  ***Vocabulary:***  ***Number names to 10 and beyond.***  ***more, less, most, least, numeral, count forward/backwards***  ***order*** | * I can compare sets of objects using number names to say which is more or less. * I can count accurately from 0-10 and beyond. * I can subitise amounts of four and five objects. * I can recognise numbers 0-10. * I can order numerals 0-5. * I beginning to match numerals and amounts up to 10. * I can count out 10 objects from a larger group. * I show awareness that numbers are made up of smaller numbers. | * Each day the children count and record the numbers for snack using a tens frame so the children see the visual representation of the amount alongside the numeral. * A range of loose parts are available with supporting resources such as counting mats and sorting trays to experiment and support a deep awareness of numbers. This includes materials that can be grouped and regrouped and materials that can be taken apart and put back together again. * Practitioners model counting, adding up, subitising, and writing numerals at various points throughout the day. * Practitioners discuss the order of numbers in context, e.g. finding a page number. * Practitioners converse with children using appropriate mathematical language. |
| “I am a critical thinker and resilient”  ***Early Learning Goals***  ***…………………………..***  ***Vocabulary:***  ***number patterns, number sequence, numeral, share, equal, whole, total, estimate*** | * I can make a reasonable estimate of a number of objects in a group. * I can count confidently from 0-10 and beyond and back from 10-0 * I can correctly order numerals 0-10 * I can match numerals and amounts up to 10. * I am beginning to conceptualise larger numbers by subitising small numbers within the number. * I have an understanding of composition of numbers to 10 * I can recall number bonds to 5 and some bond that make 10. | * Practitioners encourage children to use mathematics to answer their own questions and solve their own problems. Pose challenges that encourage mathematical thinking. |

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| **Mathematics: Numerical Patterns** | | |
|  | **Our Sequence of Learning** | **Our Unique Approach** |
| “I am a keen explorer  ***Two Year Old end point***  **…………………………….**  ***Vocabulary:***  ***Size- big, small, the same***  ***space- forwards, backwards, up, down***  ***Measure- full, empty,***  ***Time- now, next, after*** | * I can negotiate space in my familiar environment. * I can build using a range of construction materials. * I can recognise that two objects are the same shape. * I am able to fit pieces into an inset puzzle. * I enjoy filling and emptying containers and can recognise when these are full and empty. * I can understand and use language relating to size. * I can join in and anticipate repeated sound and action patterns. * I can follow the daily routine. | * Continuous provision allows children to explore shape, space and measure through a variety of different open ended materials. Including Sand, water, malleable materials, and construction play. * Adults play alongside children and point out mathematical elements as this arises in the moment, for e.g. when putting two wellies on, or when building a simple tower. * Outdoor play and forest school allows children the opportunity to explore size, shape and space on a larger scale. * During group times and circles times practitioners play games involving patterns using our bodies. * Children are supported in following the daily routine by the use of a visual timetable. |
| ***“I am active and curious”***  ***Nursery One end point***  ***…………………………….***  ***Vocabulary:***  ***Positional language- in, on, under, over, in front, behind,***  ***Shapes- square, circle, triangle, rectangle***  ***size- bigger, smaller, little, medium, large,***  ***Measure-***  ***half full/empty,***  ***heavy/light***  ***long/ short***  ***Time- Days of the week***  ***First, last, then*** | * I understand and can use positional language. * I can put resources back where they belong. * I can select shapes that are appropriate for my task. * I can create enclosures by manipulating a range of materials. * I can name some simple shapes * I show awareness of similarities between shapes sin the environment. * I am beginning to explore differences in height, length and weight. * I can explore and add to simple AB patterns. * I can recall a sequence of events in everyday life and stories | * The environment is organised to support children to be able to tidy, sort and organise the resources independently through the use of shadowing and labelling. * Practitioners model mathematical language relating to space, shape, measure and pattern in meaningful contexts whilst playing with the children. They maximise opportunities as they arise in the moment. * Continuous provision provides a range of open ended materials that can be manipulated to explore shape, space and measure. Including a variety of construction materials, loose parts, and model making on both large and small scales. * Shapes are used as planning strategies which creates opportunities for discussion about shapes. * Recall time is a key element of the plan-do-review process as we teach children to talk about past events. |
| “I am capable and confident”  ***Nursery Two end point***  ***………………………………….***  ***Vocabulary:***  ***Spatial language- above, below, around***  ***Shapes- round, straight, corners, sides, hexagon, pentagon***  ***size- biggest, smallest, huge, enormous, tiny, minute***  ***Measure-***  ***over flowing,***  ***heavier /lighter***  ***longer/ shorter***  ***Time-***  ***Months of the year***  ***morning, afternoon*** | * I can use spatial language to follow and give directions. * I can build models with increasing complexity. * I can use mathematical language to describe shapes. * I can combine shapes to make new shapes. * I am beginning to make comparisons between height, length and weight. * I am exploring measuring tools in everyday experiences and play. * I can create and recreate repeating AB patterns. * I can order and sequence events using everyday language related to time | * Children are supported to follow their creative ideas and approaches with teachers who engage their mathematical brains through sustained shared thinking– is it long enough? What do you think? How can we extend it? * Within the environment there are a range of tools to allow children to explore measuring in meaningful contexts. * Within the environment there are a range of resources to support an understanding of time and the daily routine including, visual timetables and now and next boards. |
| “I am a critical thinker and resilient”  ***Early Learning Goals***  ***…………………………..***  **Vocabulary:** | * I enjoy tackling problems involving prediction and discussion of comparisons of length, weight or capacity, paying attention to fairness and accuracy * I am beginning to experience measuring time using timers and calendars. | * Using the children’s interest as a motivator, practitioners create opportunities for mathematical problem solving activities. * Within the environment there are a range of tools to support understanding of time including sand timers, visual timetables and clocks. |