**Curriculum Plan**

Mathematics.

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| **CURRICULUM PLAN: Mathematics**  |
| **INTENT:** Our intent for the children is to learn key skills within mathematics. They will develop their ability for problem solving through challenging activities and become confident to persist when challenges occur. Children will learn through trial and error, changing strategy as needed. Developing their understanding and sense of number; * + Subitising
	+ Cardinality (the value of a number ‘how manyness’ ‘threeness of 3’
	+ Ordinality (numbers which represent position; - 1st, 2nd)
* To become confident in counting and recognising numbers to 10
* Show an ability to sort and categorise
* Build up a repertoire of number nursery rhymes
* Create and experiment with symbols and marks
* Use shapes appropriately for tasks
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| **2-3 year olds will be learning to** | **3-4 year olds will be learning to:** |
| **Numbers**Recites some number namesrepresent ideas of numberuse language of quantityknow that a quantity can change.**Shape, space and measure**Notice simple shapesCategorise by shape or sizeUse language of sizeAnticipates and understands some time-based events.Notice simple patterns Begin to use prepositional language  | **Numbers**Uses number names accuratelyrecites numbers to 10represent numbers in different ways such as on paper or fingersmatch numeral and quantityshow an interest in number problemsshow an interest in numeralscount anything not just objects.**Shape, space and measure**Shows an interest in shape and spaceAware of shapes similaritiesUse positional language Discuss routes and directionTalk about the shapes of everyday objectTalk about and explore 2D and 3D shapes Create own patterns and sequences  |

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|  | **2 year olds** | **3 year olds** | **4 year olds** |
| Number  | Key Knowledge & SkillsCounting:* Staff to model using numbers in everyday life
* To be exposed to numbers in their environment
* To be exposed to number through play
* To count from 1 to 5

Numerals:* To join in with number rhymes
* To look at numbers for a reason
* To begin to recognise personal numbers

Calculating:* To compare more/less
* To begin to use language associated with quantity
* To ask mathematical questions – Can I have more?

Key VocabularyNumber rhymes repertoireLanguage associated with quantity – more. bigger, 1 - 5 | Key Knowledge & SkillsCounting:* To count from 1 -10 by rote
* To understand 1:1 correspondence 1 – 5
* To touch count a group of objects

Numerals: * To sing rhymes involving numbers counting forward and backwards.
* To recognise some numbers up to 10 and use them as labels
* To begin to tally

Calculating:* To recognise simple quantities
* To share resources in focus time and play
* To begin to understand 1 more
* To begin to solve simple problems

Key VocabularyRhymes that count on and backQuestions – Can I have one more? How many?First and last1 – 10 Touch, count,  | Key Knowledge & SkillsCounting:* To recite numbers from 0 – 10
* To understand 1:1 correspondence 1 – 10
* To understand total
* To count out from a larger group
* To count in reverse
* To count without touching (actions)

Numerals:* To make marks to represent numbers
* To write some recognisable numbers
* To match numerals and quantity
* To recognise and use small ordinal numbers
* To put numbers in order
* To recognise when a number is missing ( 1-10)

Calculating:* To use objects to count
* To use finger numbers to calculate simple problems
* To understand 1 more, take away 1 , add 1
* To split numbers in different ways
* Use numbers to solve problems independently

Key VocabularyOrdinal numbers more, fewer, big, small, less, take away, add, equals, same, problem, numbers,  |
| Measures | Key Knowledge & Skills* To explore filling various vessels in different shapes and sizes.
* To begin to understand differences – big/ small, heavy/ light
* To explore objects of different shape sand weight
* To use own body to explore similarities and differences in terms if length and height
* Begin to understand and use the visual timetable.
* To begin to understand routines using now and next.

Key VocabularyBig, small, heavy, light, now, next, later, finished  | Key Knowledge & Skills* To compare two objects and begin to say what is different
* To begin to choose resources according to size
* To understand sequences of events
* To use the language of size in play
* To understand when a vessel is full or empty
* To anticipate the nursery routine
* To talk about events in the past

Key VocabularyFull, empty, lots, more, then, next, now, high, low, long, short, bigger, smaller. | Key Knowledge & Skills* To recall past events independently
* To talk about future events
* To begin to use time language correctly.
* To compare resources – longer, heavier, lighter, shorter, empty, full
* To use the language of opposites
* To know and follow the routines of the day.
* To use nonstandard measures (steps, blocks, hands, claps)
* To order objects
* To sequence events in stories

Key VocabularyBigger, taller, stronger, shorter, empty, full, yesterday, tomorrow, next week, first, last, near, far  |
| Shape and pattern | Key Knowledge & Skills* To join in with repeated actions in songs and rhymes.
* To begin to talk about patterns they can see e.g. spots
* To respond to changes in shape when using malleable materials.
* To stack objects
* To begin to recognise similarities in shape.
* Inset puzzles

Key VocabularyCircle, square, triangle, some, differentSpots, stripes – words linked to patterns in the environment  | Key Knowledge & Skills* To recognise simple patterns in the environment and categorise these e.g. these are all stripes
* To explore repeated patterns.
* To use different sized blocks to create their own simple structures.
* To talk about 2D shapes
* Simple interlocking jigsaws

Key VocabularyCircle, square, rectangle, triangle, oval, diamond, hexagon Repeated, same, different, over and overSides , corners, straight, flat , round, edge Balance  | Key Knowledge & Skills* To anticipate what comes next in the daily routine – pattern of events.
* To extend ABAB patterns.
* To build independently using a variety of shapes and blocks, making more complex structures that include enclosures and bridges
* To combine shapes to create new shapes.
* To talk about 2D and 3D shapes using mathematical language.
* To explore 2D and 3D shapes
* Larger, more complex interlocking jigsaws

Key VocabularyPointy, spotty, blobsFirst, then, next, after, beforeMorning, afternoon, earlier, later, in a minute.pentagon, octagon, cube, sphere, cuboid, cone, pyramid Sides, corners, faces, edges |
| Direction & Position | Key Knowledge & Skills* Fit their bodies into spaces – through doorways, in boxes, through tunnels modelling language – over, under, through
* To fit shapes into posting boxes and pieces into jigsaws.

Key VocabularyUp, under, through, overUsing the stimulus ‘We’re Going on a Bear Hunt’ for vocabulary. Now/nextMorning, afternoon, night, day  | Key Knowledge & Skills* To follow instructions using positional language.
* To follow simple directions given by adults and peers

Key VocabularyUnder, over, in front, behind, next to, now, next, later Forwards, backwards, around the corner  | Key Knowledge & Skills* To give directions to others and programmable toys.
* To use a range positional language to give directions.
* To begin to understand simple maps and create their own.
* To remember different routes and pathways.

Key VocabularyTomorrow, yesterday, later, next week, futureLeft, right, straight on, go past, walk near, back to, cross over, by the …., under the bridge, through the tunnel.Map, route, path, directions , Google maps |

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| **Impact** |
| When children leave our 2-year-old room they will be able to use number language in their play. They will complete a simple inset puzzle and be able to name basic shapes. They will recognise when two patterns are the same and differences in size.They will understand how their bodies fit into spaces and shapes fit into posting boxes. They will begin to anticipate different times of the day. The daily routines will become familiar. | When children turn from ages 3 to 4 years, they will be able to understand the importance of numbers in everyday life and count five objects accurately. They will be able to complete a 4–5-piece interlocking jigsaw. They will notice basic shapes in the environment and say when they are the same. They will begin to make repeated patterns. They will be able to understand positional language and talk about events that have happened in the past. They will understand routines and use visual prompts to support. They will be able to compare sizes and understand the vocabulary related.  | When children leave our nursery at age 4 to go to reception, they will be confident to use numbers and understand the concept of more and less. They will be able to count up to 10 objects. They will be able to complete a larger interlocking jigsaw and notice the difference between 2D and 3D shapes. They will be able to discuss patterns and create their own.They will give simple route directions to others and use positional language correctly. They will understand what is in the future and events that happened in the past. They will demonstrate their independence when following nursery routines. They will order objects by size and understand that objects can be measured in terms of weight, height and length. |