NURSERY LONG TERM OVERVIEW FOR MATHEMATICS

These statements show the typical level of development in Mathematics for nursery children. The statements are benchmarked to enable teachers to assess the rate of learning and development and to plan next steps. They will also enable staff to track children's progress towards the end of year requirements. Shape, Space and Measure is included as children's development of space, measures and spatial awareness contributes significantly to mathematical development and learning. Throughout the year children will develop their learning through a mix of child-led and directed play activities.

Mathematics

Number and Numerical Patterns

During Nursery (December March)

- I can recite some number names in sequence (not necessarily understand at this stage).
- I can mark make and ascribe some concept of number to the marks (attempts at digits from the environment, making dots, lines etc).
- I can show understanding of conservation.
- I can sort objects using one simple criteria.
- I can bring one or two objects when an adult requests.
- I can show an understanding of simple comparisons like 'more'.
- *Fast recognition of up to 3 objects, without having to count them individually ('subitising').*
- *Recite numbers past 5.*
- *Say one number for each item in order: 1,2,3,4,5.*
- *Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle').*
- *Show 'finger numbers' up to 5.*
- *Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5.*
- *Experiment with their own symbols and marks as well as numerals.*
- *Solve real world mathematical problems with numbers up to 5.*
- *Compare quantities using language: 'more than', 'fewer than'.*
- *Talk about and identifies the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs' etc.*
- *Extend and create ABAB patterns – stick, leaf, stick, leaf.*
- *Notice and correct an error in a repeating pattern.*
- *Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...'*

End of Nursery

Number and place value

- I can use number names to 10 and sometimes count accurately.
- I can represent numbers using marks, fingers or digits.

Calculation

- I can say when two small groups have the same number of objects.
- I can identify numerals in the environment.

NURSERY LONG TERM OVERVIEW FOR MATHEMATICS

Mathematics

Shape, Space and Measure

During Nursery (December March)

- I can start to fit shapes into board puzzles or shape sorters.
- I can begin to build using simple blocks.
- I can fill and empty a container.
- I can show some understanding of 'now' and 'next'.
- I can see some shapes in pictures and can start to make pictures using shapes.
- I can ask questions about the routine and what is happening next.
- I can use small world play to experiment with size, shape, differences and similarities.
- *Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'.*
- *Understand position through words alone – for example, "The bag is under the table," –with no pointing.*
- *Describe a familiar route.*
- *Discuss routes and locations, using words like 'in front of' and 'behind'.*
- *Make comparisons between objects relating to size, length, weight and capacity.*
- *Select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc.*
- *Combine shapes to make new ones - an arch, a bigger triangle etc.*

End of Nursery

Measurement

- I can talk about the routine of the day and use language like 'before' and 'after'.
- I can use comparative language like 'taller', 'shorter', 'the same'.

Geometry – properties of shapes

- I can start to identify shapes in the environment.
- I can start to find appropriate shapes for certain tasks.
- I can ask questions about my observations of differences and similarities.

Geometry – position and direction

- I can start to make more meaningful pictures, patterns and arrangements with shapes.

NURSERY LONG TERM OVERVIEW FOR MATHEMATICS

Key Skills Overview

	AUTUMN TERM	SPRING TERM	SUMMER TERM
NUMBER/NUMERICAL PATTERNS	To begin to join in with counting rhymes and songs. To begin to use gestures and number names to count objects and actions. To begin to sort objects by colour/size/shape etc To begin to know when two sets are 'the same'. To begin to subitize to 2. To develop an understanding of 'how many?' (cardinal principle) To be aware of numbers in the environment. To begin to represent numbers using fingers or marks. To begin to develop an awareness of 'more'.	To recite numbers to 5. To continue to learn counting rhymes and songs. To count up to 3 objects with one to one correspondence. To begin to subitize to 3. To show finger numbers up to 3. To be able to link numerals to amounts up to 3. To begin to identify familiar numbers in the environment. To begin to understand the language of 'more than' and 'fewer than'. To experiment with their own symbols and marks. To talk about patterns around them eg. Spotty, stripy, etc. To be able to extend and create ABAB patterns. To notice and correct an error in a repeating pattern.	To recite numbers to 10. To continue to learn counting rhymes and songs. To count up to 5 objects with one to one correspondence. To continue to subitize up to 4 To show finger numbers to 5 and above. To be able to link numerals to amounts up to 5. To begin to compare quantities using 'more than' and 'fewer than'. To say when two groups have the same amount of objects. (up to 5) To begin to solve real world problems using numbers up to 5. To identify numerals in the environment. To represent numbers using marks, fingers or digits.
MEASURE, SHAPE AND SPACIAL THINKING	To talk about and identify patterns around them. To be able to fit shapes into simple inset puzzles and shape sorters. To build simple constructions with blocks. To begin to compare objects in relation to size. To fill and empty containers. To explore and talk about 2D shapes in the environment. To make patterns and pictures using 2D shapes. To understand some positional language: 'on' 'in'. To develop an awareness of the days of the week. To be aware of simple routines of the day eg. Day and night/ Lunchtime/Hometime. To begin to ask questions about the routine and what is happening next.	To begin to complete more complex jigsaw puzzles. To be able to compare two objects in relation to size using 'long' and 'short'. To explore capacity by filling and emptying containers and using the vocabulary 'full' /'empty' To name some 2D shapes (circle and square) To use 2D shapes in their own creations and talk about the shapes they have used. To select shapes appropriately for building. To talk about shapes using some mathematical language eg. Flat, pointy, corner, straight, round. To begin to use propositions 'in' 'on' and 'under'. To begin describe a simple route/location. To begin to understand 'now' and 'next'.	To make comparisons between objects relating to size, length, weight and capacity. To begin to use language such as 'longer', 'shorter', 'the same'. To begin to identify shapes in the environment. To begin to make meaningful pictures and arrangements with shapes. To combine shapes to make new ones. To begin to ask questions about differences and similarities they have observed. To talk about the routine of the day using language like 'before' and 'after'. To understand position 'in' 'on' 'under' through words alone. To discuss routes and locations using words like 'in front of' and 'behind'.

NURSERY LONG TERM OVERVIEW FOR MATHEMATICS

POSSIBLE TOPIC RELATED ACTIVITIES AND PLAY-BASED LEARNING TO DEVELOP MATHEMATICAL SKILLS

AUTUMN TERM	SPRING TERM	SUMMER TERM
AUT 1: IT'S GOOD TO BE ME	**SPRING 1: WHAT SHALL I WEAR?**	**SUMMER 1: WHAT'S GROWING?**
Number rhymes and songs Counting fingers and body parts How many people live in your house? The Three Pigs – counting to 3/subitizing 3 Building houses – talking about shapes and using shapes appropriate for the task. Matching objects to people to see if there is enough. Autumn – collecting and sorting natural objects Counting leaves, conkers, acorns etc. Sharing conkers, subitizing, Recognising when we have 'the same' amount Making patterns using Autumn objects.	Number rhymes and songs – 5 little snowmen etc Counting fingers in gloves, buttons on snowman etc. Matching patterns on mittens/scarves. Prepositions – Polar Bear, Polar Bear where are you? Ice shapes – exploring different shapes through ice The Gingerbread Man – counting buttons, and using maths to bake gingerbread men using simple recipes Exploring adding 1 more/1 less – if we eat a gingerbread man, how many will be left? Chinese New Year – snakes/dragons – order by size Ordinal numbers – who came 1st, 2nd, 3rd in the race? Exploring capacity using rice and different containers.	Number rhymes and songs – 10 little flowers etc. Jack and the Beanstalk – counting and matching beans to pots with numerals. Counting numbered leaves as they jump/climb up the beanstalk. How many leaves are there? Comparing different lengths of plants/beanstalks. Sorting and counting seeds – finding ways to record how many they have. 'Ten Seeds' – use the story to explore '1 less' Exploring sequencing – how to grow a plant. Measuring using hands/feet. How tall are you? Comparing height with friends. Comparing shoe sizes.
AUT 2: BLAST OFF!	**SPRING 2: SPRINGTIME AT THE FARM/PETS**	**SUMMER 2: LET'S GO WILD**
Number rhymes and songs about space/rockets 5 Little Men in a flying saucer etc. Counting forwards and backwards. Making rockets – developing vocabulary of shape. Using 2D shapes to make rocket pictures Using 3D shapes/junk modelling to make rockets. Developing language of preposition – up,down, Aliens Love Underpants – looking at different patterns (spotty, stripy, etc.) Bonfire Night – counting fireworks, matching numeral to objects. Sequencing the day Christmas counting activities Matching/sorting shapes of presents Comparing size/weight of presents	Number rhymes and songs – 5 Little Ducks etc. Exploring 2D shape using tractors – shape pictures Sorting and counting farm animals. Problem Solving for the farmer – He needs 5 sheep in this field, but only has 3. What does he need to do? Milking cows – filling bottles with 'milk' Feeding the animals – how many scoops of corn does the cow need? How many does the pig need? Who needs more? Counting how many scoops as they feed the animals. How many eggs in the nest? Using egg boxes as 10 frames or for subitizing. Favourite Pet? - Making tally/charts of favourite pets. Using money and vocabulary of shopping at the vets/pet shop.	Number rhymes and songs – 5 Little Monkeys etc. Sorting and counting animals in the jungle. Looking at pattern – stripes/spots Comparing size of animals. Sharing a banana between monkeys – problem solving opportunities. Repeating patterns on a snake. Classifying and sorting dinosaurs using different vocabulary. Play 'dotty dinosaurs' – colour matching game. Find dinosaurs that are 'taller/shorter/the same' 'We're going on a dinosaur hunt' – exploring routes and directions. Explore sound patterns using 'jungle drums'