Mathematics Curriculum Intent

At Rockwood, we aim for children to grasp number and become familiar with shapes, space and measure

We do this through….

….Our Image of the Child….

LOVED	A child at Rockwood will feel loved because the staff are kind and caring towards them. Maths knowledge will be developed through well scaffolded learning opportunities tailored to the children's skills.
CREATIVE	A child will display their creativity through art, song, dance and role play; both indoors and outside. Problem solving activities will be presented to the children and they will be encouraged to create solutions.
CURIOUS	A child at Rockwood will develop curiosity through the learning opportunities provided by adults and initiated by the child themselves within our fabulous environment. Questioning will be modelled and encouraged within a child; and they will be taught how to think critically particularly in terms of number, shape and colour. Active learning will be embraced.
INDEPENDENT	A child will learn to initiate their own learning opportunities and develop their Maths skills through a wide range of enhancements. Resources will be available throughout the indoor and outdoor environment for a child to independently access to support their Maths.
CONFIDENT	A child at Rockwood will overcome their errors and misconceptions through adult support and teaching; to become confident Mathematicians.
MOTIVATED	A child will enjoy learning and become motivated to extend their own Maths knowledge through praise, encouragement and self-worth. A child will relish in their learning process and be proud of their outcome.
RESILIENT	A child at Rockwood will learn that it is OK to make mistakes; and will be encouraged to overcome these mistakes in order to complete a challenge. In terms of Maths, a child will learn to keep 'having a go' and the adults will support them in this.

…. Our Curriculum Development…

	STAGE ONE	STAGE TWO **AT TWO**	STAGE THREE **AT THREE**	STAGE FOUR **AT FOUR**	STAGE FIVE	STAGE SIX **SCHOOL LEAVERS**
Cardinality and Counting The quantity of things	• The children will explore many different objects alongside an adult to understand the term "more" and to recognise when there is zero. • The children will use simple mathematical vocabulary to describe amounts. For example, lots, more, I've got some, random number names. • The children will share objects within a group for example giving the milk to every child in the group so that each child has 1 and recognising if more is needed. • The children will respond to an adult when they say "please can I have another one?" or "some more" within play.	• Children will use number names when attempting to count different objects. • Children will join in with singing number rhymes and songs • Children will know how to play and respond to games such as 1,2,3 go!	• Children will know how to say number names in order to five • Children will recognise some personal and significant numbers such as 3, if they are three years old. • Children will know how to respond when asked "How many?" • Children will begin to correctly count 1 or 2 objects from a larger group. • Children will use their own marks to represent an amount. • Children will use their fingers when counting. • Children will know several counting rhymes and songs. • Children will know what happens if more objects are added or some things re taken away, using simple terms to describe this. • Children will know that you start to count from number 1. Solve simple number problems.	• The children will say number names in order to ten, but children may not be able to count the correct number of objects for each number name. • The children will recognise different numbers in the environment. • The children will begin to count up to five objects, from a larger group correctly including counting objects that are not in a regular arrangement. • The children will recognise that amounts have been rearranged but the amount is still the same if nothing is added to or taking away. • The children will solve number problems involving counting numbers to 5. • The children will begin to represent	• The children will say numbers beyond ten. Say number names 10-0 in the correct order. Count a group of up to five objects and know that the final number is the total number for the set. Match a number symbol from 0-5 to a number of things. Begin to say what is one more and one less than a number using objects to support them to 5. Know how many are in a group without needing to count them all, for example reading a dice.	• The children will find the total of two groups by counting them all. Record an amount they have counted using the correct number symbol to number 5 Recognise the number symbols from 0 to 10 Order number symbols from 0 to 10 correctly. Recognise a missing number symbol from a set, for example 0,1,2,3,5 To solve number problems involving 10 objects.

				quantities using their own marks or number symbols.		
Comparison Knowing which numbers are worth more than others	• The children will recognise who has more or less than them within play.	• Children will use the word 'more' in play. Explores different quantities and amounts • The children will know that items in the home corner contain different amounts. • Children will join in with number songs and rhymes.	• Children will know how to share out amounts in the role play area. • Children will know how to group items together comparing the amounts eg group of children going home at lunch time, number staying.	• The children will join in with number songs, realising that a group can change when things are added and taken away eg cheeky monkeys rhyme.	• The children will compare groups of objects noticing when they have more, less or the same. Counts to check how many in a group.	• The children will use language more and less to compare groups. • The children will find one more or one less than a number to 10.
Composition Understanding that one number can be made up from two or more smaller numbers	• The children will explore and investigate collections of objects which can be separated and placed in different containers. • The children will counting eg girls/boys/all.	• Children will know how to sort a group of objects into two different containers using different criteria eg colour, shape, number. • Children will know how to arrange and sort toys into different locations, for examples the small world animals in a toy zoo.	• Children will know several rhymes and songs which separate a number. For example 5 little speckled frogs – some in the waters and some in the pond or 5 current buns.	• The children will sing rhymes and songs which require a number to be partitioned. • The children will begin to count the number of objects in each set. For example, 3 frogs on the log and 2 in the pond • The children will see and discuss smaller numbers within a larger group. For example, in my treasure tub I have 3 green pegs and two blue ones.	• The children will begin to investigate and talk about different ways to separate five objects, recognising that the number can be separated in different ways but the total remains the same.	• The children will find a hidden number from a group of five through playing hiding games with a number of objects in a box, den etc. • The children will make a reasonable guess at the number of hidden objects
Pattern	• The children will explore and make arrangements or patterns with different objects. • The children will	• Children will know how the same object can also have differences. For example tigers both have stripes but one	• Children will know how to explore many resources and make a repeating pattern of two with adult support. (red, green)	• The children will listen to and copy a repeating pattern using sounds or actions. • The children will	• The children will make more complex repeating patterns. For example, red, red, green. • The children will use	• The children will choose their own rules for their pattern. • The children will ask a friend to copy a

	make a collection using a range of different 'loose parts' objects. • The children will notice when things are the same and when things are different. • The children will position different objects with a purpose in mind. • The children will participate in the pattern and routines of the day.	is larger than the other. • Children will use words to describe the patterns they see. • Children will know and anticipate the routine of the day and talk about what is going to happen next. • Children will know how to group objects according to their properties. • Children will know how to match items with the same pattern. For example, a pair of socks.	• Children will make patterns using objects they find in the environment. • Children will know how to continue a repeating pattern of two which an adult has started. • Children will know how to spot errors in a repeating pattern. • Children will use words to compare two different patterns.	create a pattern which an adult has asked them to. For example, "Can you make a red, blue pattern" • The children will make their own patterns using resources they find in the environment. • The children will confidently have a go at creating their own patterns.	more language to describe the patterns they have made. • The children will check and fix a pattern if there is a problem. • The children will record their own pattern using pictures and/or symbols.	pattern they have made. The children will continue a pattern which stops in the middle of the repeat. For example red, red, green , red, red, green…
Shape and Space	• The children will explore objects; particularly to filling and emptying. • The children will make arrangements with objects and fitting objects into spaces, like on the Owl 'challenge table'	• Children will know how to build with a purpose. • Children will know how to complete a simple jigsaw. • Children will know how to arrange objects with more of a purpose.	• Children will notice simple shapes in the environment. • Children will build for a sustained amount of time.	• The children will name simple shapes. • The children will use shapes according to their properties e.g. a triangle for a roof. • The children will understand positional language. Creates pictures using 2D shapes.	• The children will name 2D shapes. • The children will understand flat and solid. • The children will use positional language. • The children will talk about shapes they use whilst they are constructing.	• The children will name 2D and 3D shapes. • The children will select a named shape. • The children will sort shapes according to their properties. • The children will recreate models that they have seen. • The children will use their knowledge of shape and space to build strong structures.
Measure	• The children will explore and	• Children will know how to compare two	• The children will measure ingredients	• Comparing lengths and heights of	• The children will order items by length	• The children will order items by

	investigate resources which are different lengths. Use resources in the sand and water to explore and investigate filling and emptying. Build and construct models using wooden bricks which are different sizes. • The children will take part in the daily routine with an adult supporting them.	different items and observe differences between two objects, such as something very tall / small. • Children will be able to follow the daily routine.	for baking using scales with adult support. • The children will begin to name the day of the week correctly. Building tall and short towers with blocks. • The children will use language such as big and small to compare objects in play. • The children will anticipate key times of the day e.g. lunch time and home time.	objects in the provision e.g. long and short snakes with the playdough. • The children will show an understanding of full and empty when filling and emptying containers. • The children will show an understanding of the word heavy. Shows an awareness that a clock tells us the time. • The children will role play with money.	and height. • The children will measure items using non- standard units e.g. blocks. • The children will show an understanding of the language heavy and light. • The children will understand language relating to time. • The children will have an understanding of distance. • The children will show an understanding of what money is used for. • The children will use language full, empty and half full.	weight- heavy and light. • The children will measure items using standard measurements e.g. a ruler and tape measure • The children will use mathematical language to compare objects, weights and volumes. • The children will solve problems relating to measure. • The children will have an understanding of which resources measure time. • The children will use language relating to time.