Reception Long Term Plan- Core Knowledge Document

Autumn

Strand: Mathematics

Core Taught	Core Provision
Specific learning from taught sessions, focused on knowledge and skills: Teach, model and scaffold: - Teach, model and scaffold the one-one principle *(assigning one number name to each object that is being counted. Counting each object only once and ensuring every object is counted.)* -Teach, model and scaffold the stable order principle *(Understand that when counting, the numbers must be said in a certain order.)* -Teach, model and scaffold lining up objects in order to count them. -Teach model and scaffold the number names 1-10. -Number formation 0-10 -Teach, model and scaffold the cardinal principle *(understanding that the number name assigned to the final object in a group is the total number of objects in that group)* -Model counting different groups of objects -Teach, model and scaffold the order irrelevance principle *(understanding that the order we count a group of objects is irrelevant* -Modelling counting objects in different ways *(Left to right, right to left, top to bottom, bottom to top etc)* -Know that the cardinal number indicates how many there are in a set -Know different ways to classify and sort objects (E.G- Colour, texture, size or shape) -Teach and model conservation (Recognising that the number stays the same if none have been added or taken away) -Teach, model and scaffold subitising (Instantly recognising a small quantity without having to count how many there are)	*Area* Classroom: -Number line displayed (Clearly visible during carpet inputs) -Adults encouraging, modelling and scaffolding counting throughout all areas of the provision. -Adults modelling use of mathematical language frequently throughout provision (lots, few, more, less, many etc) -Number cards for children to use at their own choosing -Five and Ten frames available -Images of shapes, five and ten frames and part-part whole models Creative Area: -Pattern activities incorporated into area (colour patterns, printing patterns, bead patterns, shape patterns) -Lolly sticks (Can be used to re-create shapes) Role Play: -Phone and contact list included in role play area (E.G- Can you dial the number to ring the fire station to let them know about the fire?) Small World: -Sorting activities (sorting animals/people by type, sorting the correct number of animals into numbered pens) Reading Area: -Counting/Number books available Outside:

-To identify and continue repeating patterns -To recognise different patterns in the environment -Model and scaffold the use of 5 and tens frames -Teach number nursery rhymes and provide props for children to use when singing -Understand and use key mathematical vocabulary taught -Model finding one more and one less, using various resources (number lines, tens frames, counters etc.) -Teach model and scaffold sequences key events (Morning routine, events from the school day etc)	-Mathematical games that involve counting, patterns, matching numbers and amounts etc *(Skittles- counting how many they have knocked down, creating repeating patterns with the natural resources, ball games- did you score more or less goals than x?)* -Instruction included in mud kitchen to make different con-cocktions for the children to follow (E.G- Add 2 cups of mud and 5 flowers. Stir together and then add 1 cup of water.) -Sorting hoops Additional: -Visual timetables used daily in class -Number formation visuals and practise available -Die and subitising images included in provision (E.G- On bikes and scooters in outdoors, dice in board games) -Subitising representations

Spring	
Strand: Mathematics	
Core Taught	**Core Provision**

Specific learning from taught sessions, focused on knowledge and skills: -Know the one-one principle -Know the stable order principle -To know how to line up objects in order to count them, but not need to line up objects when counting -To know the number names 1-20. -Number formation 0-20 -To know the cardinal principle -To independently and confidently count different groups of objects up to 10. -To know the order irrelevance principle -To independently count objects in different ways *(Left to right, right to left, top to bottom, bottom to top etc)* -Know that the cardinal number indicates how many there are in a set -Know different ways to classify and sort objects (E.G- Colour, texture, size or shape) -To understand and explain conservation -Begin subitising independently -To identify and continue repeating patterns (AB, ABC, ABB, AAB etc) -To recognise different patterns in the environment and begin explaining how they repeat -To use five and ten frames independently -To know 5 counting nursery rhymes by heart -Understand and use key mathematical vocabulary taught -Independently find one more and one less, using various resources (number lines, tens frames, counters etc.) -To sequence key events using time connectives (Morning routine, events from the school day etc) -Teach and model the name number zero and the matching symbol -Teach, model and scaffold number bonds to 10 -Represent and show number bonds to 10 using different resources (tens frames, 5 frames, part-part whole models, counters and a variety or objects, numerals etc)	*Area* Classroom: -Number line displayed (Clearly visible during carpet inputs) -Adults encouraging, modelling and scaffolding counting throughout all areas of the provision. -Adults modelling use of mathematical language frequently throughout provision (lots, few, more, less, many etc) -Number cards for children to use at their own choosing -Five and Ten frames available -Part part whole models Creative Area: -Pattern activities incorporated into area (colour patterns, printing patterns, bead patterns, shape patterns) Role Play: -Phone and contact list included in role play area (E.G- Can you dial the number to ring the fire station to let them know about the fire?) Small World: -Sorting activities (sorting animals/people by type, sorting the correct number of animals into numbered pens) Reading Area: -Counting/Number books available Outside: -Mathematical games that involve counting, patterns, matching numbers and amounts etc *(Skittles- counting how many they have knocked down, creating repeating patterns with the natural resources, ball games- did you score more or less goals than x?)* -Instruction included in mud kitchen to make different con-cocktions for the children to follow (E.G- Add 2 cups of mud and 5 flowers. Stir together and then add 1 cup of water.) -Sorting hoops -Shape wands *(For 2D and 3D shape hunts)* Additional: -Visual timetables used daily in class

-Teach, model and scaffold adding through combining groups through using a variety of resources -Teach model and scaffold positional language and spatial awareness -Teach, model and scaffold names and key information about 3D shapes -Teach, model and scaffold names and key properties of 2D shapes -Teach and model ordinal numbers (a number denoting the position in a sequence. 1st 2nd 3rd) -To independently sort objects by amounts of categories	-Number formation visuals and practise available -Die and subitising images included in provision (E.G- On bikes and scooters in outdoors, dice in board games) -Subitising representations

Summer	
Strand: Mathematics	
Core Taught	**Core Provision**
Specific learning from taught sessions, focused on knowledge and skills: -To know the number names 1-20. -To form numbers from 0-20 clearly -To independently and confidently count different groups of objects to 20 and beyond -To independently count objects in different ways *(Left to right, right to left, top to bottom, bottom to top etc)*	*Area* Classroom – Numicon – Counters – Opportunities for sharing quantities of food etc *(How can we tell if we have an even or odd amount? Can it be shared equally? Etc)* – After local walk, add small number stickers into the construction area *(Can the children build their own street of houses? Can they remember what they saw on the walk?)*

-Independently classify and sort objects in different ways (E.G- Colour, texture, size or shape) -To understand and explain conservation -To subitise independently up to 5 -To identify, continue and create repeating patterns (AB, ABC, ABB, AAB etc) -To recognise different patterns in the environment and explain how they repeat -Use ten frames independently -To know 10 counting nursery rhymes by heart and use these to support with counting activities -Understand and use key mathematical vocabulary taught -Independently find one more and one less, using various resources (number lines, tens frames, counters etc.) -To sequence key events using time connectives (Morning routine, events from the school day etc) -Know the name number zero and the matching symbol -To know and represent number bonds to 10 -Independently represent and show number bonds to 10 using different resources (tens frames, 5 frames, part-part whole models, counters and a variety or objects, numerals etc) -Independently add through combining groups through using a variety of resources -Independently subtract through taking away -To understand and use positional language and spatial awareness -To know names and key information about common 3D shapes -To know names and key properties of common 2D shapes -Know and use ordinal numbers in everyday situations (E.G- lining up, racing) -To independently sort objects by amounts of categories -To understand the abstraction principle (anything can be counted including things that cannot be touched, including sounds and movements – such as jumps) -Model and scaffold more complex patterns (E.G- musical patterns, patterns following spirals and zig zags)	– Numicon feely bag activities. *(Can the children identify if it is odd or even just through touch? How?)* – *Equipment for children to access to make their own patterns and arrangements.* Creative Area: – Subitising – Sharing – Halving amounts mats available to use in provision – Adults modelling sharing equally throughout provision *(E.G- food in the home corner, bricks in the construction area, people in the small world etc.)* – Sharing games/activities to help understand idea of sharing equally Small World: – Missing Numbers – Arranging equipment/resources – Timing turns – Number challenges – Role Play: Pizza, cake etc *(Foods easy to split in half used in home corner)* Reading Area: – Number the books in areas using numicon. – Maths books – Sharing Outside: – Large hoops and counters, beans bags etc for halving amounts – Planks of wood to create large balancing scales in outdoor area – Timing each-other and keeping score – Number challenges Additional: – Visual timetables used daily in class

-To count forwards and backwards with numbers between 0 and 20 -To count on or back from given numbers between 0 and 20 -Teach, model and scaffold doubling numbers -Teach, model and scaffold halving numbers -Teach model and scaffold finding odd and even numbers -To know which numbers are odd and which numbers are even - To add two groups together to find the total amount. -To add two groups together to find the total amount. - To double numbers to 10. - To halve quantities by sharing items into 2 equal groups. - To investigate odd and even numbers. - To describe and compare length, height and distance. - To measure and compare weight. - To explore and des	– -Number formation visuals and practise available – -Die and subitising images included in provision (E.G- On bikes and scooters in outdoors, dice in board games) – -Subitising representations – Exploring Complex Patterns through focus activities – Number challenges – Doubling through focus activities – Halving through focus activities – P.E. Challenges