Parklands
Educate Together

Mathematics in Pre-School

A guide for parents

Learn Together to Live Together

This guide is designed to inform families of how Maths is taught and how to support at home. It has been created using guides from White Rose Mathematics to support.

This Booklet The aim of this booklet is to give you, as parents, a better understanding of the key concepts your child will be learning and how they are taught. It provides ideas and resources so you can support your child at home. This booklet is available to download from the curriculum section of our website, with elements hyperlinked so you can easily access the resources.

What is teaching for Mastery? At Parklands Educate Together we see teaching for mastery in maths as allowing children to gain a deep understanding of maths, allowing them to acquire a secure and long-term understanding of maths that allows them to make continual progress to move onto more complex topics.

We believe that everyone can do maths and there's no such thing as being a 'good' or 'bad' mathematician. Maths is a subject that everyone can and should be able to perform confidently and competently.

We teach by breaking down maths objectives into the smallest steps, so that every child is secure in every new concept before moving on. We focus upon teaching for fluency, reasoning and problem solving.

What will my child learn in mathematics this year? At Parklands Educate Together, we use a progression document that is consistent throughout the Trust. In Pre-School, we learn Maths throughout the day in our play and through play-based activities as well as deliberate class learning for 10 mins, 3-4 times a week.

Overleaf is an overview of the maths that your child will learn during their time in pre-school. You can check the year group medium term planner on the class page for further information on what the current focus is.

Educate Together

Preschool Progression Document

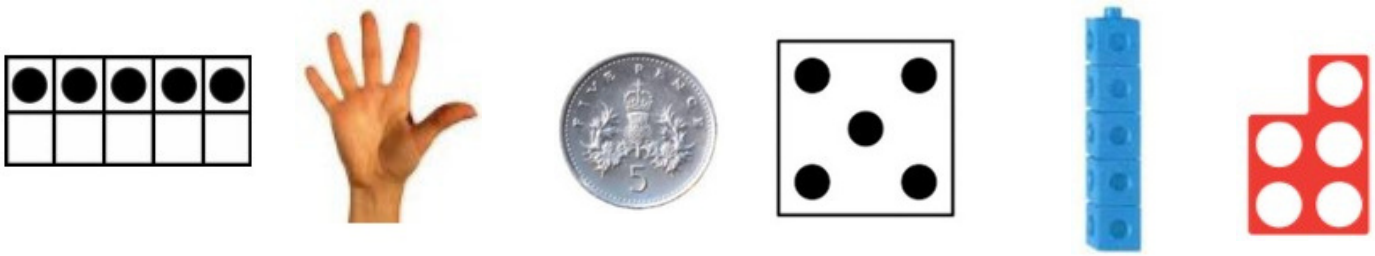
Mathematics	Starting Pre-School	Next Steps	Next Steps	Next Steps	Next Steps	Leaving Pre-School
Number Numerical patterns *Shape, space and measure	Can subitise 1 object. Can Counts accurately to 3. May count out of order e.g. 1, 2, 3, 6, 8. Can notice patterns and arrange things in patterns, such as separating things by colour or grouping cows and horses separately. Can compare amounts, saying e.g. 'lots' 'more' 'same'. Will create simple structures, usually towers of blocks on top of one another.	Can subitise 1-2 objects. Interest in representing numbers on fingers, not always accurate. Counts accurately to 5.	Subitise up to 3 objects. Can count 5 objects from a larger group. Can represent numbers 1-3 on fingers. May recognise numerals that are special e.g. '3' if they are 3 years old. Understands cardinal principle. Counts accurately to 10. Recognise simple shapes e.g. circle and star. **What does this look like?** Cardinal principle – knowing that the last number reached when counting a small set of objects tell you how many there are in total.	Begins to compare quantities within 10. Recognise numerals 1-5. Represent numbers 1-5 on fingers. Matching sets of objects to numerals (up to 3). Use language 'more' or 'less' comparing numbers within 5. Can copy ABAB patterns e.g. red, blue, red, blue. Continue to recognise shapes and also patterns, such as 'spotty' 'pointy' 'stripes'.	Begins to represent numbers within 10 using pictorial representations. Recognise numerals 1-5. Can represent numbers on fingers 1-5 quickly. Experiments with own symbols and numbers. Count using 1:1 correspondence. Can continue ABAB patterns. Continue to recognise shapes. Understand position through words alone with no pointing e.g. "The bag is under the table."	Can use key mathematical language e.g. 'take one away', 'altogether', 'add one more'. Solve real world mathematical problems with numbers. Can sort, match and compare objects and amounts. Count objects, actions and sounds. Link the number symbol (numeral) with its cardinal number value. Learning to use words such as 'first', 'then', after' to describe a pattern of events. Can continue and create ABAB patterns e.g. stick, leaf, stick, leaf. Compare size, mass and capacity. Can use accurate shapes when building e.g. a triangle for a roof. Can notice an error in an ABAB pattern and correct it. Can talk about routes and locations, using words such as 'in front of' and 'behind'

How do we teach for fluency in Pre-School? In Pre-school, we aim to teach so that children have a deep understanding of number.

Representing Numbers

We want to develop children's number sense so that they really understand the number rather than just recognising the numeral. It is good to know that seeing '5' means five, but we want to dig deeper so that children really get to know the 'five-ness' of five.

Children need to understand that numbers can be represented in many ways, not just as a written numeral. We use many different objects and pictures to show that numbers can be represented in lots of ways.



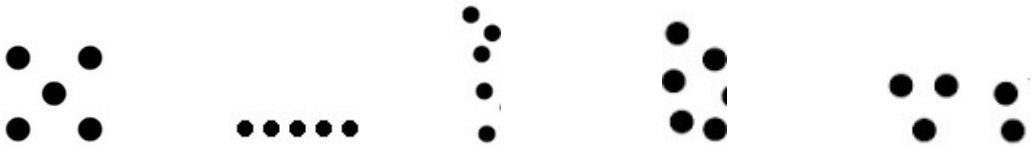
Children sometimes need lots of practise to recognise numbers in different forms. We play matching games and encourage children to recognise and make different amounts in our indoor and outdoor areas.

Counting

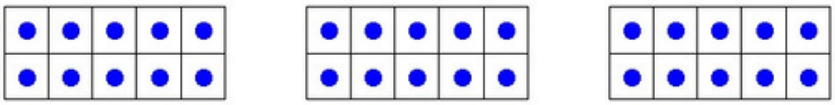
When counting, children need to understand that

- That we need to say one number for each object counted (touch counting).
- The final number we say is how many altogether. Some children continue to count after they have reached the final object as they don't connect the numbers they are saying to the objects in front of them.
- That we can count objects in any order and the total stays the same.

Recognising amounts Another skill that is very important is recognising small amounts without the need to count them. Initially this should be by using concrete objects such as those shown on the previous page but as children progress, allowing them to see groups of dots in different arrangements helps them to mentally 'see' how many objects are there without needing to count. This is a very important skill when children begin to add and subtract. Using dice is a good way to practise this skill before moving onto objects
in different arrangements.



Understanding that the total stays the same even when the objects move
When children first start to use numbers, they often do not understand that if we move objects into another arrangement the total stays the same. We practise this with many different types of objects but a useful tool is using a tens frame to be able to move counters around.



How to Support your child There are a wide range of materials and resources available to support your child with their maths at home.

The medium term planner on the class page will support you with the current focus. Below are some ideas to support, as well as other resources that can be used if your child is finding an aspect of maths tricky. Pictures below are hyperlinked for ease.

Numberblocks

Numberblocks is a fantastic programme available on BBC iPlayer. It ~~really supp~~orts children's early knowledge of number.

White Rose One-Minute App This app is great for short one-minute daily practice on adding, subtraction and subitising skills. It is free to download on iOS, amazon and android devices.

Example Statements	Ideas of Activities
Add 1 more/1 less	Counting a number of sweets, eating one and saying 1 fewer/1 less. Couting objects – what if I had one more? -Simple games such as incy wincy spider with a dice, where you go up or down the spout one spot at a time.
Understanding of numbers to 5	Finger buddies – Show a number of fingers, and your partner finds the others that make 5. Use printout of numicon shapes to explore different ways of making numbers Busy Things: Number Jump/ Hungry Chicks/ Rocker Shocker/Playground Adding different types of materials or toys together. Board games: roll two dice and add the total Show different amounts of fingers on hands and add together
I can count objects, actions and sounds	-Playing copy my rhythm games with clapping hands, tapping toes etc. -Counting coins dropped into a tin. Counting cars, sticks, tins of beans, puddles etc. -Board games (counting number of spaces)
I can subitise up to 5 objects.	Board Games – dots on dice Find the number – flashcards with different representations of 5 (e.g. dice, numicon, objects) Busy Things: Sit Down/ Balloon Tree/Number Jump/ Fun two, three, four

This booklet is available on our Maths page, under "Curriculum" and "Subjects".

Images are hyperlinked to help you get direct to the resources mentioned in this guide.