

## Mathematical Development

A positive attitude towards and an understanding of mathematical concepts are important in everyday life. These develop slowly in young children, so they need opportunities to revisit activities and to experience mathematical ideas in many different contexts. At Ditton Nursery we seek to extend, informally, the mathematical experiences the children have already had in their home environment. This helps to lay the foundations for positive attitudes.

Children learn about maths through play and their daily experiences. Meaningful to them, hands on activities are best for developing concepts. At Ditton Nursery we use all areas of indoor and outdoor play, everyday routines, songs, rhymes, jingles, stories and games provide opportunities to develop children's understanding of mathematical concepts such as sorting, matching, comparing, classifying, counting and making patterns.

At Ditton Nursery we find that the following parts of our routine particularly lend themselves to supporting Mathematical concepts:

**Snack time** – we have a daily maths focus here including:

- Counting the children and fruit
- Comparing the amounts of different types of fruit
- Simple practical addition and subtraction and the language associated with this – more, fewer, less
- Halves and quarters
- Discussing the size of the fruit
- Having a variety of foods, sorting them onto plates and talking about what is the same or different (for example look, feel and smell)
- Measuring capacity when pouring drinks checking if there are enough cups for everyone; if we need to take some away
- Talking about the change of shape when cutting up fruit and vegetables

### **Stories, rhymes and games**

We use stories, songs, rhymes and games that have a mathematical content help children to understand numbers.

### **Physical development**

We believe that children are more likely to understand mathematical concepts like position and size if they're able to use their body movements and senses to feel what it's like to be in, on or under something. We have developed our environment accordingly to allow children to experience these concepts – eg inside the cosy pod; inside the tunnel, on the hill / climbing frame; under the trees in the forest area; in the sand etc

### **Routines and environment**

## Mathematical Development

Our Nursery is full of mathematical opportunities and has exciting things for children to explore, sort, compare, count, calculate and describe. We support them to be creative, critical thinkers, problem solvers and to have a go. We feel that our environment and the routines we create support mathematical development in a number of ways:

- using a visual timetable to sequence the order of events
- giving children time to organise themselves to take turns and talk about being first, last and next;
- looking at the numbers on everyday objects
- talking about the number of children who can play at the sand or at the bricks and why;
- playing simple games with an element of counting and learning to recognise numbers in different groupings
- talking about the shapes of everyday objects they may see in the Nursery eg such as plates, sandwiches and windows;
- encouraging children to examine and choose objects that are the same, for example to find a block that is exactly the same as another;
- using a variety of shapes to make pictures and build models.
- encouraging children to explore limited spaces eg how many children can fit into a large box and what happens if another child climbs in or one climbs out

We believe that children need lots of experience in using numbers in different ways so that they understand the concept of a number really well and can recognise that number in lots of different situations for example know that there are 3 things spoon in the sand without counting, and however they are arranged or moved, there are still 3 spoons there.