Maths in EYFS

Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to count confidently, develop a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers. By providing frequent and varied opportunities to build and apply this understanding - such as using manipulatives, including small pebbles and tens frames for organizing counting - children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built. In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures. It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, 'have a go', talk to adults and peers about what they notice and not be afraid to make mistakes

Mathematics

ELG: Number

Children at the expected level of development will:

- Have a deep understanding of number to 10, including the composition of each number;
- Subitise (recognise quantities without counting) up to 5;
- Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.

ELG: Numerical Patterns

Children at the expected level of development will:

- Verbally count beyond 20, recognising the pattern of the counting system;
- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity;
- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

How do we achieve these outcomes?

Cardinality and Counting

- We teach children number names, initially to five, then ten, and extending to larger numbers, including crossing boundaries 19/20 and 29/30.
- We will practice some counting back but young children find this harder because of the demand this places on the working memory.
- We count things in irregular arrangements and we provide opportunities to counting things that cannot be seen, touched or moved.
- We provide opportunities to count out or 'give' a number of things from a larger group, not just to count the number that are there so that the children know that the last number counted is the total so far. This is to support them in focusing on the 'stopping number' which gives the value. We do this through playing dice games to collect a number of things and playing track games and counting along the track.

- We practice subitising, subitising is recognising how many things are in a group without having to count them one by one. Children need opportunities to see regular arrangements of small quantities, e.g. a dice face, structured manipulatives, etc., and be encouraged to say the quantity represented. Children also need opportunities to recognise small amounts (up to five) when they are not in the 'regular' arrangement, e.g. small handfuls of objects. We do this using dot cards, dominoes and dice as part of a game, including irregularly arranged dots (e.g. stuck on), playing hidden objects games where objects are revealed for a few seconds, for example, small toys hidden under a bowl – shuffle them, lift the bowl briefly and ask how many there were
  'all at once fingers' – show me four fingers.
- We provide children with opportunities to match a number symbol with a number of things using wooden numerals, calculators, handwritten - include different examples of a number
- We teach children to recognise amounts that have been rearranged and to generalise that, if nothing has been added or taken away, then the amount is the same - correcting a puppet who may say that there are more or fewer objects now, as they have been moved around, e.g. spread out or pushed together contexts such as sharing things out (grouping them in different ways) and then the puppet complaining that it is not fair as they have less, encourage the children to make different patterns with a given number of things.