**EYFS Mathematics Policy 2021**

**At Newark Hill Academy, developing ‘Number Sense’ is at the heart of our Maths Mastery Curriculum in Early Years.**

**What does ‘Number Sense’ mean to us?**

We believe that these are the four key elements (by Sue Gifford) are the basis for the development of children’s early number sense and future success in maths:

* **Counting**
* **Cardinality**
* **Composition**
* **Comparison**

**In order to achieve this, children need to be able to have:**

1. An awareness of the **relationship between number and quantity**

2. An understanding of **number symbols, vocabulary and meaning**

3. The ability to engage in **systematic counting**, including notions of cardinality and ordinality

4. An awareness of **magnitude** and **comparisons** between different magnitudes

5. An understanding of **different representations of number**

6. Competence with **simple mathematical operations**

7. An awareness of **number patterns** including recognising missing numbers

At Newark Hill Academy, developing Number Sense routines is at the core of our planning and delivery of mathematics. We ensure that children have the opportunity to explore and learn the following concepts:

* **Subitising**- Procedural (being able to ‘just see’ how many are in a group, without counting- cardinality) and Conceptual (being able to see numbers within numbers (e.g. 6 is made of 4 and 2 -composition)
* **Magnitude** –knowing which set has more
* **Counting** –using number labels
* **1:1 Correspondence**
* **Cardinality** -when counting, the last number gives the quantity
* **Hierarchical Inclusion**–smaller numbers are part of bigger numbers; 1 more/less
* **Part / whole relationships**
* **Compensation** –thinking relationally 5+1=6 so 4+2=6
* **Unitising**–1 unit can have a value of more than 1; 20= 2tens; 2 groups of 10 or 1 group of 20 instead of 20 ones

**Our Curriculum:**

The teaching of Maths in EYFS involves providing children with opportunities to develop and improve their skills in counting, understanding and using numbers, calculating simple addition and subtraction problems; and to explore mathematical patterns. Children will develop their understanding through planned, purposeful play and through a mix of adult-led and child-initiated activity.

We use the Numberblocks programme to deliver most aspects of the Maths curriculum. Snappy animation and loveable characters combine with engaging storylines to gently introduce concepts of number to support early mathematical understanding.

Math planning is based around the the NCETM materials where each episode is used as a launch pad, helping children to bring the numbers and ideas to life in the world around them. Teachers highlight and develop the key mathematical ideas that are embedded in the programmes.

By using Numberblocks, teachers and children can:

1. **Highlight the ‘Maths’ in the episode,** where key mathematical concepts that are featured in the episode are explained.
2. **Use mathematical language**- we believe it is important that practitioners model precise and correct mathematical language. The episodes provide a language structure to connect each mathematical idea to different contexts. Children will initially use their own language to talk about the mathematics, which in time will develop into correct and precise language.
3. **Talk and Discuss –** The NCETM materials provide a stimulus to talk about what children have noticed, and draw their attention to key aspects of the mathematics.
4. **Enabling Environments** gives suggestions for extending the mathematics into the wider Early Years environment where children engage in meaningful activity and explore mathematical concepts.

As well as this, we are constantly striving to create a rich environment in order to support children to develop deep understanding of number. In order to do this, we ensure that careful consideration is made of the following areas:

* **Maths on display-** is engaging, relevant and displays children’s representation of number.
* **Maths activities/ games**- are set out daily to challenge children to reflect on number.
* **Use of Manipulatives**- use of Numberblocks as well as Numicon, five/tens frames, counters, bead strings etc.
* **Outdoor environment**- offers an open space to explore and ignite children’s natural curiosity for number.
* **Daily Routines**- which develops Number Talk such as: Number of the day/week, songs, chanting.