# Maths

# More than just numbers and counting!



# Non- Negotiable Skills

- ***language skills – understanding the words: more, less, equals, total***
- ***communication skills – able to speak in full sentences to explain thinking (not the same as participating in a question and answer session!)***
- ***physical skills – core stability, muscle strength.***

# What are the essential skills required for maths?

**Writing:** * hand / eye co-ordination
pincer grip
* core stability
* record findings in a variety of ways which can be read and understood by themselves and others

**Reading**: * recognise, recall, understand and interpret information

# Skills involved

## Number

***1) Counting with 1:1 correspondence***
***2) Recall, recognise and order numbers***
***3) Understand that the last number counted is the total***
***4) Understand the twoness of two***
***5) Understand anything can be counted, not just physical objects***
***6) Recognise and understand place value***
***7) Problem solving***

# Skills involved

## Shape, Space and Measure

***1) Recognise, recall and understand properties of the common 2D and 3D shapes***

***2)Understand different forms of measure; volume, capacity, length, time***

Exactly the same as reading, it is the **understanding** of a concept that is essential for becoming a successful mathematician.

Completing pages of sums are merely learnt formulas if understanding is missing.

Children must be able to recognise and then solve problems in a variety of situations.

They must have an imagination so that they can think creatively.



# These skills will be developed by children:

- by practising using physical resources and manipulatives
- by recording their observations in a meaningful way
- by posing their own problems and then solving them in turn
- by being inquisitive and asking questions
- by thinking critically and analysing information



*The methods we employ in school to teach maths involve teaching all these skills*

- Children are allowed to work at their own pace.
- Children are given time to think and process information.
- Answers are rarely provided, instead co-operative thinking and problem solving strategies are encouraged.
- Children are often asked ***'how'*** they solved a problem, or ***'why'*** they think they are correct rather than asking for the actual answer.
- Children are expected to explain their thinking and methods used to solve problems when they are both right and wrong.
- Mistakes and misconceptions are acknowledged and explained.
- Children are encouraged to test their hypothesis to check its validity.
- Recording findings in formal ways are the last pieces of the mathematical jigsaw to be added.

- Maths is completed every day by all children in lots of different ways.
- Some concepts have to be taught explicitly like phonics, however some occur naturally throughout the day.
- CIA is vital for children to practice and demonstrate their knowledge. It also offers excellent assessment opportunities for adults.
- When a child is confident they will use a method independently in their own investigations or play. This is a far more reliable way of assessing a child's knowledge rather than children reciting facts.

# So what can you do to help your child?

Let your child see ***you*** doing maths; counting, thinking out loud, measuring.

Share/celebrate maths as often as possible.

Solve problems that occur naturally with your child, discussing your thinking and describing your thought processes.



# Confidence and independence =

# Happy Learners

# Thank you for listening.

Please feel free to post any questions on Tapestry or in your child's contact book.