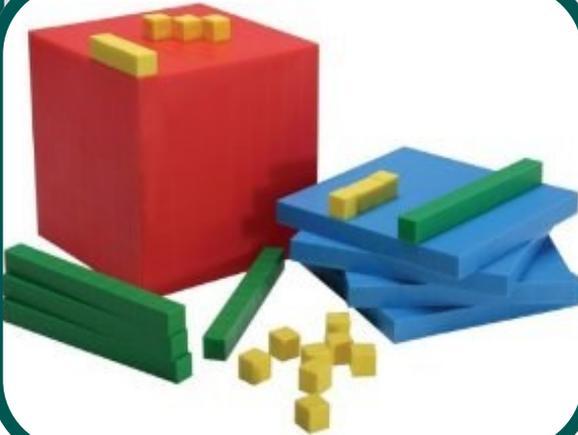


## Mathematics Mastery

Mathematics Mastery is an exciting new scheme introduced last year for Key Stage 1 where children learn through a 'hands-on' investigation method, helping them to develop a deeper understanding of key mathematical concepts.

The children develop their mathematics by focusing on depth rather than breadth, with a greater emphasis on securing skills, as opposed to covering content.

The Mathematics Mastery program is closely linked to the curriculum of Singapore which is consistently one of the highest ranked nations for mathematical performance and already we have seen a great impact on the standards in Year 1. This year it is in Reception, Year 1 and Year 2 and eventually it will be throughout the whole school.



## How to support your child

There are lots of ways to support your child at home. Here are a few ideas:

- ◆ The basis for good maths is good mental calculation. Encourage children to use numbers mentally when they are with you, particularly in shops, when cooking and using money .
- ◆ Let your children see how you use maths every day.
- ◆ Encourage your children to recall times tables when they are with you. They do not need to be done in order and the quicker they can recite them the better for their development.
- ◆ Play maths games on the internet; the BBC have a range of available resources but there are many other websites and apps.



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# Grazebrook Primary School



## Mathematics



## Our Mathematics Scheme

Mathematics across the school is based on a Singaporean approach to teaching and learning. The method uses a three-step learning model, which consistently introduces concepts in a progression. It moves from the concrete to visual representation and then on to the more abstract (questioning and solving written equations). Children are taught not only to know how to do something, but also why it works. In Reception and KS1, we use a scheme called Mathematics Mastery and in KS2 a scheme written by another local Federation, Primary Advantage. Both schemes encourage very high expectations of what a child can achieve and support a deep understanding of number concepts.

## Maths Meetings

To ensure mathematics remains at the forefront of the children's learning, we have developed and adopted a practice from Mathematics Mastery that we use across the whole of the school.

In the afternoon, for 15 minutes each day, the children focus on reinforcing key mathematical facts, that include time, money, shapes, patterns and equivalence between numbers. It is fun and interactive in its approach with songs, rhymes and



## Mental Calculations

At Grazebrook, we focus very closely on children developing their mental mathematics skills. It is a crucial part of our mathematics syllabus and research shows that the better a child is at mental calculations, the better they are with mathematics in general.

Our Learn-its program, which is a feature of all maths lessons, allows children to learn, recall and recite number facts at increasing speed each day with a weekly test each Friday.

## Problem Solving

The new National Curriculum has simplified the mathematical content that has to be taught in schools. However, something that has been given an increased importance is the role of problem solving, right across the primary years.

The Government want children to leave school as 'secondary school ready' and a large part of this focus is on children applying the mathematics knowledge they have acquired to real life problems.

Through Maths Meetings, IPC, the Primary Advantage and Maths Mastery programs, the children have a greater number of opportunities to solve real life problems in challenging and exciting ways.

## Concrete, Pictorial and Abstract (CPA)

Crucial to both the Mathematics Mastery and Primary Advantage programs is the children being taught to examine mathematical concepts through the use of a CPA approach.

By using concrete apparatus, which can include dienes rods, counters or any interactive material the teacher can demonstrate a concept visually allowing the children to picture it.

The children's learning then develops to the pictorial stage where they are able to incorporate their concrete work into more recognisable number pictures and patterns.

Finally, the children because of the linear approach to the mathematics content, swiftly move on to the standard algorithms for addition, subtraction, multiplication and division, with less and less reliance upon concrete materials.

