

# MATHS NEWSLETTER

## How Maths teaching develops

The concrete, pictorial, abstract approach is used to develop an understanding of maths.

This month we will explain to you what this is and how it helps the children develop as mathematicians.

1

## CONCRETE



Children might begin by handling real objects...



...then using physical representations of them.

## Maths APPS and sites to try



[www.woodley.suffolk.dbprimary.com](http://www.woodley.suffolk.dbprimary.com)

## The Concrete, Pictorial, Abstract approach

The Concrete Pictorial Abstract (CPA) approach is a system of learning that uses physical and visual aids to build a child's understanding of abstract topics.

Pupils are introduced to a new mathematical concept through the use of **concrete** resources (e.g. fruit, Dienes blocks etc). When they are comfortable solving problems with physical aids, they are given problems with pictures – usually **pictorial representations** of the concrete objects they were using.

Then they are asked to solve problems where they only have the **abstract** i.e. numbers or other symbols. Building these steps across a lesson can help pupils better understand the relationship between numbers and the real world, and therefore helps secure their understanding of the mathematical concept they are learning.

### Why teach this way?

Pupils achieve a much deeper understanding if they don't have to resort to rote learning and are able to solve problems without having to memorise. When teaching reading to young children, we accept that children need to have seen what the word is to understand it. Putting together the letters c-a-t would be meaningless and abstract if children had no idea what a cat was or had never seen a picture.

People often don't think of this when it comes to maths, but to children many mathematical concepts can be equally meaningless without a concrete resource or picture to go with it. This applies equally to teaching maths at KS1 or at KS2.

## Maths Selfie

Maths is all around us and we would like you and your children to prove it! Send in your Maths Selfies showing the children using maths outside of school and in everyday life. This could be counting money in a shop, measuring and weighing when cooking, measuring the length of something, or anything else you can think of to do with maths. Please email your maths selfie to [admin@woodley.suffolk.sch.uk](mailto:admin@woodley.suffolk.sch.uk)

2

## PICTORIAL



Drawings act as a bridge between the concrete objects children have been using and the abstract symbols they must learn to use.

3

Finally, children learn to use abstract symbols to solve problems.

$$10 + 7 = 17$$