Maths at home

Norton Infant School

Year 1

March 2015

Maths in Year 1

I am Miss Morton, a year 1 class teacher and I'd like to introduce myself as the new maths coordinator for Norton Infant School. I took over this role in January this year and am excited to develop maths with our school and have ideas of how you can help make maths a fun, everyday part of life at home!

In September 2014 the National Curriculum for Key Stage 1 and 2 changed and was introduced to our Year 1 children. There are some changes from the previous curriculum and hopefully this document will help you understand how this affects our daily maths.

The principal focus of mathematics teaching in key stage 1 is to ensure that pupils develop **confidence** and **mental fluency** with whole numbers, counting and place value. This should involve working with numerals, words and the four operations, including with practical resources (e.g. concrete objects and measuring tools).

At this stage, pupils should develop their ability to recognise, describe, draw, compare and sort different shapes and use the related vocabulary. Teaching and learning should also involve using a range of measures to describe and compare different quantities such as length, mass, capacity, volume, time and money.

Number	**Number and place value** • counting in steps of 1, 2, 5 and 10 forwards and backwards from different starting points within 100 • reading and writing numbers to 100 in digits, and numbers to 20 in words as well • identifying one more and one less than a number within 100 • identifying and representing numbers using objects and pictorial representations including the number line • using the language of: equal to, fewer, more than, less than, most and least **Calculation** • reading, writing, interpreting and solving mathematical statements involving addition, subtraction, multiplication and division • representing and using number bonds and related subtraction facts within 20 **Fractions** • recognising, finding and naming a half as one of two equal parts of an object, shape or quantity, and a quarter as one of four equal parts of an object, shape or quantity
Geometry	**Properties of shapes** • recognise and name common 2D and 3D shapes including rectangles, squares, circles, triangles, cuboids, cubes, pyramids and spheres **Position and direction** • describe position, directions and movements, including half, quarter and three-quarter turns
Measurement	• comparing, describing and solving practical problems for length, height, mass, weight, capacity, volume and time, and using related vocabulary • measuring and beginning to record length, height, mass, weight, capacity, volume and time • recognising and knowing the value of different denominations of coins and notes • sequencing events in chronological order and using related vocabulary • telling the time to the hour and half past the hour and draw the hands on a clock face to show these times

So how can you help?

The most important thing is that our children have a positive and inquisitive attitude towards Maths. Maths is all around us and is part of daily life, it is not something to be scared of, but something to embrace!

You could try the following simple activities with your child whilst at home or out and about…

- Counting things that you see (cars, people wearing hats, dogs, steps taken etc.), counting is so important for your child and should be done every day!
- Number or shape spotting in the environment (on signs, in shops, on number plates, on front doors etc.).
- Working out in hours and minutes how long it takes to get from one place to another.
- Adding up the cost of items when shopping, what coins or notes might be used and what change will be given.
- Looking at weight and liquid amounts on food products to become familiar with g, kg, ml and l.
- Use the television guide to see when their favourite programs are on and how long for.
- Measuring ingredients and following recipes.
- Sharing toys equally with friends or siblings.
- Working out how many of a certain food you would need if this people were having tea (e.g. how many fish fingers if everyone needs 3?)

Useful websites

Children love to play games on a computer or tablet and there are many websites that are great for practicing maths skills online, many of which we use in daily maths lessons at school.

I am Learning – https://iamlearning.co.uk

BBC Bitesize for Key Stage 1 – http://www.bbc.co.uk/bitesize/ks1/maths/

Topmarks – http://www.topmarks.co.uk/interactive.aspx?cat=8

Woodlands Maths Zone – http://resources.woodlands-junior.kent.sch.uk/maths/

Snappy Maths - http://www.snappymaths.com/

Calculation Strategies

We are often asked, "How do the children work calculations out?" and the answer really is, "However is best for them!" We teach many different strategies for each of the four operations (addition, subtraction, multiplication and division) in the hope that the children will find whichever best suits them and the given situation.

Below are examples of strategies that we teach, it is important for the children to be able to experience mathematical calculations practically using physical objects so that they can fully understand why an answer is correct or not.

Addition

Children are taught to understand addition as combining two sets and counting on.
We supply children with a variety of resources for them to be able to work out additions practically such as counters, cubes, Numicon, Base 10, number lines and 100 squares and their fingers! When numbers are lower they can count out amounts of the two (or more) sets of objects to be combined and then count them altogether.

For example 7+6=13 becomes  = 13

For larger additions the children are encouraged to use a number line or 100 square. They find the biggest number and then count on from there (with their finger) to find the total.
Partitioning is a strategy that we use when the children become confident enough with place value to be adding 2 digit numbers. We teach the children to identify the tens and the units from each number, add the tens together, add the units together and then recombine.

For example 32 + 26 = becomes 30 + 20 = 50
then 2 + 6 = 8
and 50 + 8 = 58

Subtraction strategies

Subtraction is the opposite of addition. Children are taught that it is taking an amount away from a starting number. At first they will use equipment such as counters and cubes to count out the starting amount and then physically remove some. This then progresses to children drawing circles or lines to represent the starting value and then crossing out to take away. Children will also use the number line and hundred square strategy, as in addition, however they will jump the opposite way! Once children become confident with counting backwards, this can be a useful mental strategy to use.

Multiplication strategies

Gone are the days that 5 and 6 year olds are made to learn their times tables by heart! Instead, they are firstly taught to count in steps of 2, 5 and 10. This is the basis of multiplication and it is an important step in the process of understanding it. After counting in steps has been introduced, the children learn about 'repeated addition' which is adding the same number over and over again. **For example** 5 + 5 + 5 + 5 = 20. As with all the calculation strategies, this is done in a very practical context at first. The children are then introduced to the 'X' sign and taught the related vocabulary for it. The terms 'groups of' or 'lots of' are the most useful as it is easy for the children to visualise or build '4 groups of 5'.

Division strategies

Division is the opposite of multiplication. We begin division in a very practical way by sharing items between children, such as there are 8 sweets and 2 children, how many sweets does each child get? Or, there are 18 toy cars and 3 children, how many cars does each child get? This strategy can also be used to share such things as crayons into pencil pots, or eggs into egg boxes etc.
The children need to do lots of practical practice before moving onto recording division calculations as a number sentence (18÷3=6)