Key Stage 1 Parents Maths Workshop

Friday 22nd January 2016

Mr Houghton

Aims of the session

- to become more familiar with maths in Key Stage 1
- the concrete, pictorial and abstract model
- to demonstrate some practical resources that we use in school
- to think about how you can support your child's maths education

The Maths Curriculum

The three main aims of the National Curriculum are:

- **Fluency-** The ability to recall and apply fundamental knowledge rapidly and accurately.

- **Reasoning-** the ability to explain their learning, justify and prove their line of enquiry to others.

- **Solve Problems-** the ability to apply their learning to a variety of problems with increasing difficulty.

Year 1 Key Expectations

- Count to & across 100, forwards & backwards from any number.
- Read & write numbers to 20 in digits & words.
- Read & write numbers to 100 in digits.
- Say 1 more/1 less to 100.
- Count in multiples of 1, 2, 5 & 10.
- Know bonds to 10 by heart.
- Use bonds & subtraction facts to 20.
- Add & subtract:
  - 1 digit & 2 digit numbers to 20, including zero.
- Add any three 1-digit numbers with a total up to 20.
- Solve simple multiplication & division with apparatus & arrays.
- Recognise half and quarter of object, shape or quantity.
- Sequence events in order.
- Use language of day, week, month and year.
- Tell time to hour & half past.
- Halve numbers to 10.
- Double numbers to 5.
- Correct formation of digits.

Year 2 Key Expectations

- Compare & order numbers up to 100.
- Read & write all numbers to 100 in digits & words.
- Say 10 more/less than any number to 100.
- Count in multiples of 2, 3 & 5 & 10 from any number up to 100.
- Recall & use multiplication & division facts for 2, 5 & 10 tables.
- Recall & use +/- facts to 20.
- Derive & use related facts to 100.
- Recognise place value of any 2-digit number.
- Add & subtract:
  - 2-digit nos & ones
  - 2-digit nos & tens
  - Two 2-digit nos
  - Three 1-digit nos
- Recognise & use inverse (+/-).
- Calculate & write multiplication & division calculations using multiplication tables.
- Recognise & use inverse (x/÷).
- Recognise, find, name & write 1/3; 1/4; 2/4; 3/4.
- Recognise equivalence of simple fractions.
- Tell time to five minutes, including quarter past/to.

Our School Aims

At Oak Lodge we believe that maths is a fundamental life skill to enable children to be successful in their lives.

We adopt a 'mastery' approach to teaching maths, which means that we endeavour to develop a deep mathematical understanding of concepts.

Children are taught mathematical concepts until they have a clear understanding of them so that they can apply them to a broad range problems, situations and investigations – rather than accelerating children on to new objectives.

Our School Aims - Mastery

With a deep understanding of a concept, through practical, visual as well as theoretical models, a child is given secure foundations on which to build their future mathematical knowledge and understanding.

Challenge comes from going deeper in understanding, developing a child's ability to reason, enquire and solve.

Concrete, Pictorial and Abstract

In order to develop a 'deep' understanding of maths a number of practical resources are required to give children a feel for what numbers actual are and what they 'look like'... **Concrete**

We use a variety of objects, including: counters, beads, cubes, multilink, dienes (HTU), Cuisneaire rods and Numicon to name but a few.

Your 1st Challenge

- Using any apparatus or manipulatives, on your table show me what 12 is.

- From your creation, what other things can you tell me about 12?

Pictorial

- Moving on from manipulatives, **<u>Pictorial</u>** representations give children another view of numbers without losing the idea of their size but without being able to touch or move them

<u>Challenge 2</u>

On your whiteboards, can you draw me a picture of one third.

Explain to someone else on your table why what you have drawn represents a third.

What questions could you ask someone else about your third?

Abstract

The maths that most people would associate with school:

- 2 x 4 = 8

Where actual objects have been left behind to be replaced by decontextualised numbers.

It is really important that all children experience all of these representations of number and maths at all stages of their mathematical learning.

Numicon

Numicon is a 'multi-sensory' approach to teaching maths which focuses on maintaining the concept of numbers and their properties throughout a child's progression in their maths understanding.

Challenge 3

- How many different ways can you make the number 15?

Challenge 4

- Hannah and Megan share out a bag of 20 apples. Hannah has 2 more apples than Megan. How many apples do they each have?

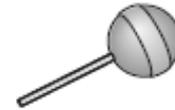- Can Hannah have three more apples than Megan? Explain how you know.

Sample question from a Year 2 SATs reasoning test paper

15 A shop sells these sweets.
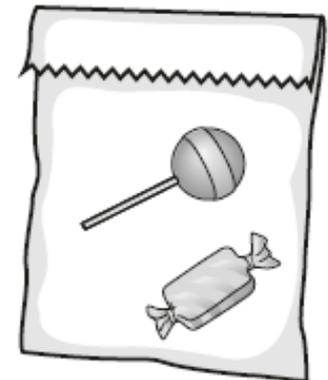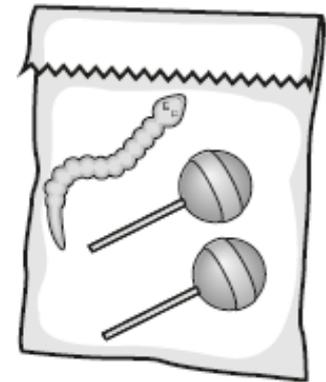
2p   5p   10p

Abdul spends exactly **20p** on sweets.

Tick (✓) the bag of sweets he buys.

How you can support your child

Through practise of key knowledge (number bonds, times tables) – short, regular bursts of *fun* practise

Practise of key skills (refer to school calculation policy for guidance)

Talk and discussion with your child about maths to bring it in to the real world

Talk to us

Numicon Homework bags

A letter giving the opportunity to purchase a Numicon maths homework bag for around £15 -£16 will be coming out early next week if you are interested in purchasing for extra resources to practise at home with.