



Welcome to the parent and carer session Creating 'Can do' mathematicians







"Whether you think you can or you think you can't, you're probably right."

Henry Ford

The aims of this meeting



- Identify some of the key concepts that children need to support their development as mathematicians
- Put the ideas in to practise
- Discuss the importance of context









Objective – multiply two and three digit numbers using a formal written method

Story

Strategy

Scribing

How much rubbish does ______ throw away each week?



planned teacher input multiplication methods concrete resources - Numicon visuals - arrays images to support the story photographs of volume of waste

recording: photo drawing diagram written method summary

Demonstrates understanding

Or...



...and so on...

Conceptual understanding



The Language of Multiplication

X Lots of Groups of Times Multiply Once, twice, three times... ten times...times as big, long, wide... and so on Repeated addition Double Pairs

How many in each group? How many altogether?



Drawing pictures, for example:



Drawing equal groups of objects. In this case, 3 lots of 3 = 9.



Billingshu

Х



Lego features multiplication in the number of studs on each brick.

sillingshy.



In this example, showing three lots of six, or, $3 \times 6 = 18$

Billingshurn



In this example, showing three lots of six, or, $3 \times 6 = 18$

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Early Multiplication - REPEATED ADDITION



aillingshu

Array





Number line





Grid method





Long multiplication

53 X 6 3×2 210 3×70 00 3×400 7 O 50×2 0 3 500 50×70 00 50x 400 7



Algebra



3x + y = 19

Algebra - resources





Algebra - resources



۵	۵	۵
2b	۵	۵
۵	b	2c

All rows equal 18. What is the value of a, b and c?

Algebra - resources





All rows equal 18. What is the value of a, b and c?



Conceptual understanding

Supported by:

- Concrete resources
- Visuals
- Images
- Diagrams
- Experiences



And now, the moment you've all been waiting for!

In class...



- The chance to learn and practise mathematical skills
- Context
- Real life

The children should ask - 'Why?'

Maths is about...

- Deep inquiry
- Pattern spotting
- Making connections
- Communicating
- Looking for generalisations







Problem solving using resources to support ideas

Have a go at one of the problems.

Which resources might help?

Noah

Sports Day

Mr Fish wants to set up a hurdles race on Sports Day. Using the model



of the track, let him know how many different options he has if the hurdles are to be equally spaced.

Sealed Solution

A set of ten cards, each showing one of the digits from 0 to 9, is divided up between five envelopes so that there are two cards in each envelope. The sum of the two numbers inside it is written on each envelope. Which cards are in each envelope? How do you know?





How many creatures could he have seen?

How many different answers can you find?



Online resources



• http://nrich.maths.org/4348



Thank you for coming!

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