NORD ANGLIA EDUCATION

I Can Do Maths

DATE: 21 September 2016

Introduction

‘… mathematical understanding is critical to our children's future. Our economic future depends on stimulating innovation, developing technological breakthroughs, making connections between scientific disciplines. And none of that is possible without ensuring more and more of our young people are mathematically literate and mathematically confident.’

Aims of the workshop

- To assist parents in understanding the key parts of the Mathematics Curriculum

- To provide some helpful hints on how you can develop your child's mathematical ability at home

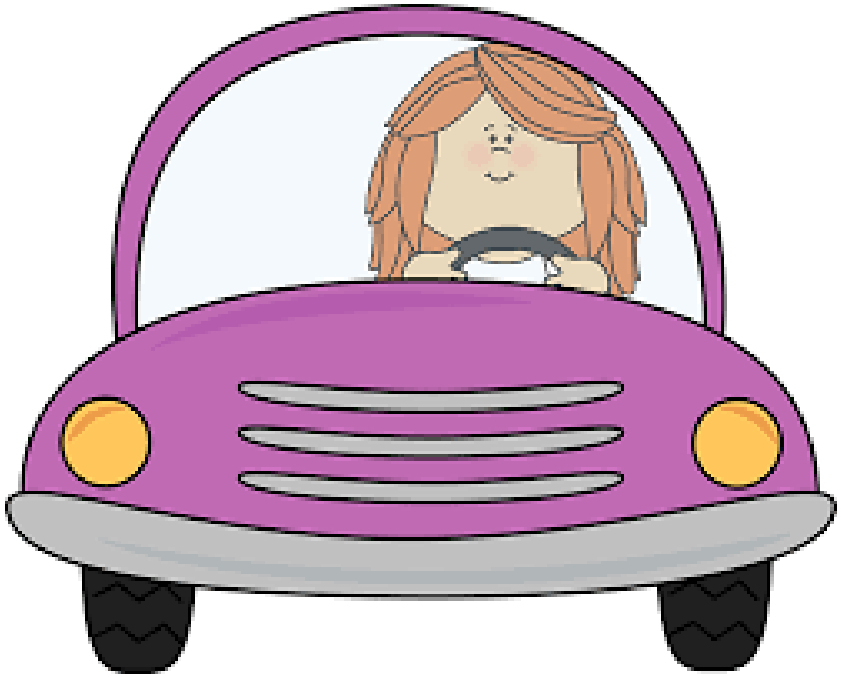
Maths Curriculum

Three key messages

- Develop Fluency
- Reason mathematically
- Solve problems

Develop Fluency

Mastery of Mathematics



What is mastery?

- know how to do it
- becomes automatic
- really good at it
- can show someone else

Onwards …

Developing Fluency

Number Fluency

Memorising and repeating a procedure over and over again

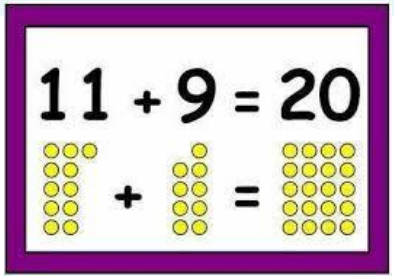
Three Goals

- Efficiency
- Accuracy
- Flexibility

Progression in Mental Maths

Year One	Year Two
Count to and across 100	Count in steps of 2, 3 and 5 and in tens
Read & write numbers to 100 in numerals Write numbers to 20 in words	Read & write numbers to 100 in numerals and words
Count in 2s, 5s and 10s	Recall and use multiplication and division facts for 2x, 5x,10x tables fluently
Know number bonds to 10 & 20	Recall and use addition and subtraction facts to 20 fluently Use related facts up to 100

FOCUS: Develop confidence and fluency



Progression in Mental Maths

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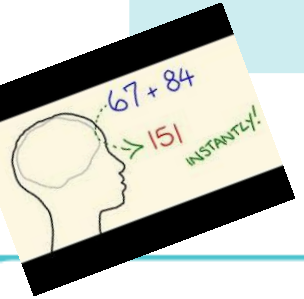
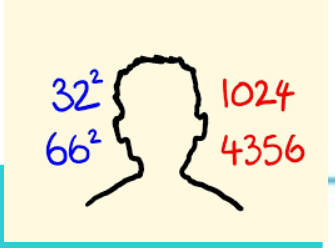
Year Three	Year Four
Read and write numbers up to 1000 in numerals and words	Become fluent in the order and place value of numbers beyond 1000
Count in multiples of 4, 8, 50 and 100	Count in multiples of 6, 7, 9, 25 and 1000
Find 10 or 100 more or less than a given number	Find 1000 more or less than a given number
Add and subtract numbers mentally – up to 100 and beyond	Practise adding and subtracting mentally with increasingly large numbers
Recall and use multiplication and division facts for 3x, 4x and 8x tables	Recall and use multiplication and division facts for tables up to 12 x 12



FOCUS: Become increasingly fluent with whole numbers and the four operations (+, -, x , ÷)

Develop efficient methods for calculation

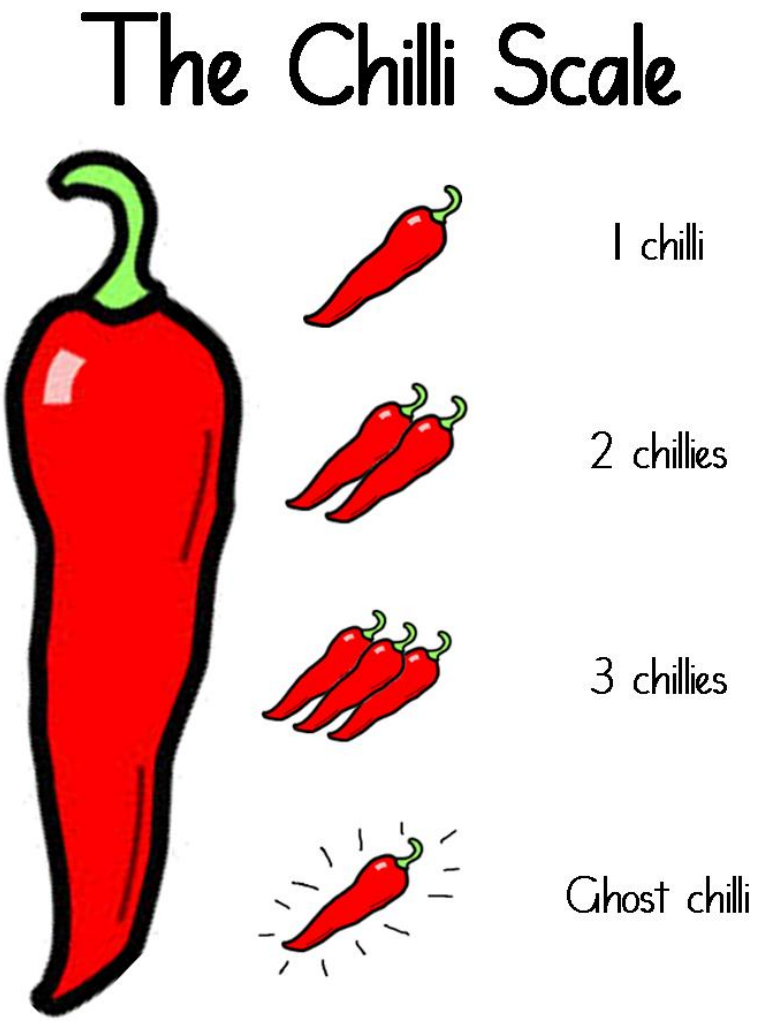
Progression in Mental Maths



Year Five	Year Six
Read, write, order and compare numbers up to 1 000 000	Read, write, order and compare numbers up to 10 000 000
Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000	Use negative numbers in context
Add and subtract numbers mentally with increasingly large numbers (e.g. 12 462 – 2300 =)	Add and subtract/ multiply and divide numbers mentally with increasingly large numbers
Multiply and divide numbers mentally drawing upon known facts	Continue to use all the multiplication tables to calculate mathematical statements and to maintain fluency
Multiply and divide whole numbers and decimals by 10, 100 and 1000	Recall and use multiplication and division facts for tables up to 12 x 12

FOCUS: By the end of Year 6, pupils should be fluent in written methods for all four operations, including long multiplication and division, and in working with fractions, decimals and percentages

The Chiili Scale is used to sort activities into different levels of difficulty



The hotter the chilli – the more challenging the activity

Formal methods

- https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/238967/Mathematics_Appendix_1.pdf
- http://www.familymathstoolkit.org.uk/advice-for-families

Useful Websites

Subtitle

- http://www.crickweb.co.uk/ks2numeracy.html (also has activities for EYFS and KS1)
- http://www.topmarks.co.uk/maths-games/7-11-years/times-tables
- http://www.bbc.co.uk/skillswise/game/ma13tabl-game-tables-grid-find
- http://www.mad4maths.com/8_x_multiplication_table_math_game/
- http://resources.woodlands-junior.kent.sch.uk/maths/timestable/interactive.htm

Thank you.

www.britishschool.org.cn/shunyi