The New Maths Curriculum

September 2014

Why mathematics?

- ‘It is a creative and highly inter-connected discipline that has been developed over centuries’
- ‘It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and nearly all forms of employment’
- ‘A high quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically’
- ‘An appreaciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject’

The aims of the national curriculum

All pupils will:

- ‘Become fluent in the fundamentals of mathematics, including carried and frequent practice with increasingly complex problems over time’
- ‘Reason mathematically by following a line of enquiry’ ‘ developing an argument, justification or proof using mathematical language’
- ‘can solve problems by applying their mathematics to a variety of routine and non-routine problems’ ‘including breaking down problems into a series of simpler steps and persevering in seeking solutions’

How does the new curriculum compare to the present primary framework for Mathematics (2006)

A brief overview of what's gone and what has been added compared to the framework that is being currently used (2006), starting with year One.

Year One

What's gone?	What's been added?
•Data handling/statistics is removed from Y1 •No specific requirement to describe patterns •No specific requirements to describe ways of solving problems or explain choices	•Counting and writing numerals to 100 •Write numbers in words up to 20 •Number bonds secured to 20 •Use of vocabulary such as equal, more than, less than, fewer etc

Year Two

What's gone?	What's been added?
•Rounding two-digit numbers to the nearest 10 •Halving/doubling no longer explicity required •Using lists/tables/diagrams to sort objects	•Solving problems with subtraction •Finding/writing fractions of quantities (and lengths) •Adding two 2 digit numbers •Adding three 1 digit numbers •Demonstrating commutativity of addition and multiplication •Describing properties of shape (eg, edges, vertices) •Measuring temperature in degrees celcius •Tell time to enarest 5 minutes •Make comparisons between more/less/= •Recognise £ p symbols and solve simple money problems

Year Three

What's gone?	What's been added?
•Specific detail of problem-solving strategies •Rounding to nearest 10/100 moves to year 4 •Reflective symmetry moves to year 4 •Converting between metric units moves to year 4 •No requirement to use Carroll/Venn diagram	•Adding tens or hundreds to 3 digit numbers •Formal written methods for addtion/ subtraction •8 times tables (replaces 6 times tables) •Counting in tenths •Comparing, ordering, adding and subtracting fractions with common denominators •Identifying angles larger than/smaller than right angles •Identify horizontal, vertical, parallel and perpendicular lines •Tell time to the nearest minute, including 24 hour clock and using Roman Numerals

Year Three ……continued!

What's gone?	What's been added?
	•Know the number of seconds in a minute and the number of days in each month, year and leap year

Year Four

What's gone?	What's been added?
•Specific detail on lines of enquiry, representing problems and find strategies to solve problems and explaining methods •Using mixed numbers •Most ratio work moved to Y6 •Written division methods •All calculator skills removed from KS2 •Measuring angles in degrees	•Solving problems with fractions and decimals to two decimal places •Rounding decimals to whole numbers •Roman numerals to 100 •Recognising equivalent fractions •Knowing equivalent decimals to common fractions •Dividing by 10 and 100 (including decimal answers) •Using factor pairs •Translation of shapes •Finding perimeter/area of compound shapes •Solve time conversion problems

Year Five

What's gone?	What's been added?
•Detail of problem-solving process and data handling cycle no longer required •Calculator skills moved to KS3 •Probability moves to KS3	•Understand and use decimals to 3dp •Solves problems using up to 3dp and fractions •Write %stges as fractions; fractions as decimals •Use vocabulary of primes, prime factors, composite numbers etc •Know prime numbers to 20 •Understand square and cube numbers •Use standard multiplication and division methods for up to 4 digits •Add and subtract fractions with the same denominator •Multiply proper fractions and mixed numbers by whole numbers •Deduce facts based on shape knowledge

Year Five …..continued!

What's gone?	What's been added?
	•Distinguish regular and irregular polygons •Calculate the mean average

Year Six

What's gone?	What's been added?
•Detail of problem solving processes no longer explicit •Divisibility tests •Calculator skills move to KS3 •Rotation moves to KS3 •Probability moves to KS3 •Median/mode/range no longer required	•Compare and ordering fractions greater than 1 •Long division •4 operations with fractions •Calculate decimal equivalent of fractions •Understand and use order of operations •Plot points in all 4 quadrants •Covert between miles and kilometres •Name radius/diameter and know relationship •Use formulae for area/volume of shapes •Calculate area of triangles and parallelograms •Calculate volume of 3-d shapes •Use letters to represent unknowns (algebra)

Year Six ….continued!

What's gone?	What's been added?
	•Generate and describe linear sequences •Find solutions to unknown problems

What next….how can we support the children?

Big Maths

- Lots of strategies are being taught already at MVW through Big Maths. These strategies are supporting the children in all areas of calculation and counting, as well as being taught earlier than required for the new National Curriculum
- Encourage the children to complete simple, everyday mathematical challenges at home, as well as supporting home learning, this is usually topic linked and is follow up learning to maths subjects.