Maths Calculations

TUESDAY 10TH FEBRUARY

Introduction

- **A new Primary National Curriculum for England was introduced in September 2014.**
- **Some aspects of maths have moved from one year group to another, some are new and some have been removed.**
- **The new curriculum is more demanding than the previous and children are expected to be taught, and learn more than before.**

- **The new curriculum is currently statutory for children in Years 1, 3, 4 and 5 and will be for all children from September 2015 (Year 2 and 6)**
- **This is because children currently in Year 2 and 6 will sit SATs based on the old curriculum.**
- **One key change is the reintroduction of efficient methods such as vertical addition and subtraction and long division.**

- **All the objectives from the new curriculum will be worked on throughout the year.**
- **Children are taught their year group objectives so you will need to be familiar with these – please refer to the National Curriculum or available handouts.**
- **Any extra support you can provide in helping your child is greatly valued.**

Headline changes to the maths curriculum

- **Multiplication facts now have to be learnt up to 12 x 12**
- **A single formal written method is to be taught for addition, subtraction, multiplication and division**
- **Calculation of fractions is included**
- **Calculation of the area of shapes other than squares and rectangles is included**
- **Probability has been removed from KS2 to KS3**
- **Emphasis on essential numeracy skills and arithmetic including money and time**
- **Calculators to be limited to later years.**

Specific changes: Year 1

YEAR 1

Changed content	How it is different?
count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number	Formerly Year 2
count in multiples of twos, fives and tens	Formerly Year 2
represent and use number bonds and related subtraction facts within 20	Formerly Year 2
compare, describe and solve practical problems for capacity/volume **measure and begin to record the following: capacity and** volume	New content
describe position, directions and movements, including … three-quarter turns	Formerly Year 2

Specific changes: Year 2

YEAR 2

Changed content	How it is different?
count in steps of … 3… from any number, forward or backward	Formerly Year 3
recognise, find, name and write fractions 1/3 …. of a length, shape, set of objects or quantity	Formerly Year 3
choose and use appropriate standard units to estimate and measure … temperature (°C)…to the nearest appropriate unit, using … thermometers	Formerly Year 3
compare and order … volume/capacity and record the results using >, < and =	Formerly Year 3
tell and write the time to five minutes	Formerly Year 3

Specific changes: Year 3

Changed content	How it is different?
count from 0 in multiples of 4, 8, 50 and 100	Formerly Year 4
add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	Formerly Year 4
recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	Formerly Year 4
write and calculate mathematical statements for multiplication and division ... progressing to formal written methods	Formerly Year 4
solve problems, including missing number problems, involving multiplication and division, including integer scaling problems and correspondence problems in which n objects are connected to m objects	New content
add and subtract fractions with the same denominator within one whole	New content
measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	Formerly Year 4
measure the perimeter of simple 2-D shapes	Formerly Year 4
tell and write the time... using Roman numerals from I to XII...	New content
tell and write the time from an analogue clock, including using 24-hour clocks	Formerly Year 5
estimate and read time with increasing accuracy to the nearest minute... use vocabulary such as a.m./p.m...	Formerly Year 4
identify horizontal and vertical lines and pairs of perpendicular and parallel lines	Formerly Year 4 and Year 5

Specific changes: Year 4

Changed content	How it is different?
count backwards through zero to include negative numbers	Formerly Year 5
read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value	New content
recall multiplication and division facts for multiplication tables up to 12x12	New content
use place value, known and derived facts to multiply and divide mentally, including... multiplying together three numbers	New content
multiply two-digit and three-digit numbers by a one-digit number using formal written layout	Formerly Year 5
multiply two-digit and three-digit numbers by a one-digit number using formal written layout	New content
add and subtract fractions with the same denominator	New content
round decimals with one decimal place to the nearest whole number	Formerly Year 5
read, write and convert time between analogue and digital 12 and 24-hour clocks	Formerly Year 5
describe positions on a 2-D grid as coordinates in the first quadrant	Formerly Year 5
describe movements between positions as translations of a given unit to the left/right and up/down	Formerly Year 5
plot specified points and draw sides to complete a given polygon	Formerly Year 6

Specific changes: Year 5

Changed content	How it is different?
read Roman numerals to 1000 (M) and recognise years written in Roman numerals	New content
know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers	Formerly Year 6
establish whether a number up to 100 is prime and recall prime numbers up to 19	Formerly Year 6
multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers	Formerly Year 6
divide numbers up to 4 digits by a one-digit number using the formal written method of short division...	New content
recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3})	New content
compare and order fractions whose denominators are all multiples of the same number	Formerly Year 6
add and subtract fractions with the same denominator and multiples of the same number	New content
multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	New content
recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	Formerly Year 6
read, write, order and compare numbers with up to three decimal places	Formerly Year 6
solve problems involving number up to three decimal places	Formerly Year 6
understand and use equivalences between metric units and common imperial units such as inches, pounds and pints	Formerly Year 6
... estimate the area of irregular shapes	Formerly Year 6
estimate volume and capacity	New content
estimate and compare acute, obtuse and reflex angles	Formerly Year 6
identify angles at a point and one whole turn (total 360°)	Formerly Year 6

Specific changes: Year 6

Changed content	How it is different?
read, write, order and compare numbers up to 10 000 000 **and determine the value of each digit**	New content
multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication	New content
divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division	New content
add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	New content
multiply simple pairs of proper fractions, writing the answer in its simplest form	New content
divide proper fractions by whole numbers	New content
use, read, write and convert between standard units, converting measurements of ... volume... **from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places**	New content
recognise when it is possible to use formulae for area and volume **of shapes**	New content
calculate the area of parallelograms **and triangles**	New content
find unknown angles in any triangles, quadrilaterals, and regular polygons	New content
illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius	New content
... construct **pie charts**	New content

Progression in calculations

- **Addition: Mrs McMurray**
- **Subtraction: Mrs O'Connell**
- **Multiplication: Miss Duncan**
- **Division: Mrs Laws-Williams**