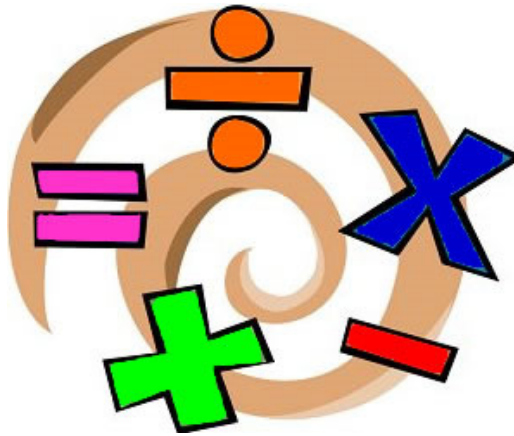# The New Maths Curriculum

The aims of the 2014 National Curriculum for Maths

'The National Curriculum for mathematics aims to ensure that all pupils:

- become fluent in the fundamentals of mathematics
- can solve problems by applying their mathematics
- can reason mathematically by following a line of enquiry'

The 2014 National Curriculum for Maths...

- is a knowledge based curriculum-it tells us what to teach but not how to teach

- is only a skeleton around which schools will be expected to flesh out the content in more detail

- goes both further and faster than the current curriculum

Year One

- **Number-** count to and across 100; read and write numbers to 100 in numerals; read and write numbers from 1-20 in numerals **and words**

- **Number facts –**number bonds and related subtraction facts to 20 and within 20

- **Multiplication and division-** use of arrays

- **Fractions-** recognise and name a quarter as one of four equal parts of an object, shape or quantity

- **Measurement-** money specifically referenced (coins and notes)

- **Geometry (position and direction) -** whole, half, quarter and **three-quarter turns**

- **Data handling (now called Statistics)-**not included in Y1

Year Two

- **Number-** count in steps of three

- **Addition and Subtraction-** add three single digit numbers (specifically mentioned), add and subtract two two-digit numbers (specifically mentioned)

- **Multiplication and Division-** greater emphasis on knowing times tables (2x, 5x and 10x) and related division facts; remainders not included

- **Fractions-** introduced to a wider range of fractions (1/3, 2/4); simple equivalence introduced; simple mixed numbers introduced (non-statutory guidance)

- **Measurement-** money specifically referenced, including using £ sign; ml and g introduced; temperature and thermometers introduced; tell and write time to the nearest five minutes (including quarter past/to), analogue time only

- **Statistics (data handling)-**tally charts introduced; Venn and Carroll diagrams not specifically referenced (but sorting shapes included in statutory guidance)

Year Three

- **Number-** count in multiples of (4), 8, 50 and 100; find 100 more or less than a given number; write numbers to 1000 **in words**;

- **Addition and subtraction-** add and subtract numbers with up to 3 digits, using formal methods of columnar addition and subtraction

- **Multiplication and division-** recall and use multiplication and division facts for the 8x table (up to 12th multiple); progress from mental to **formal written methods** (two digits by one digit); remainders not mentioned

- **Fractions-** add and subtract fractions with the same denominator, within one; compare and order unit fractions and fractions with the same denominator

- **Measurement-** mm introduced; finding perimeter of simple shapes; read time to the nearest minute; use am and pm; use 12 hour and introduce 24hr clocks; use Roman numerals from I-XII

- **Geometry (properties of shapes)** - recognise angles as properties of shapes or a description of a turn (use 'acute' and 'obtuse' in the non-statutory guidance); use horizontal, vertical, parallel and perpendicular lines (symmetry only mentioned in non-statutory guidance)

- **Geometry (position and direction) -** not included in Y3?

- **Statistics (previously called data handling)-** tally charts not mentioned (but are in Y2); Venn and Carrol diagrams not mentioned; more reference to using simple scales

Year Four

- **Number-** use Roman numerals to 100 (C); count in multiples of 6, 7, 9, 25 and 1000; find 1000 more or less than a given number

- **Addition and Subtraction-** add and subtract numbers with up to four digits using the formal written methods of columnar addition and subtraction, where appropriate

- **Multiplication and Division-** know all multiplication and division facts to 12x12; multiply and divide by using formal written layout (two and three digits by one digit); recognise and use factor pairs; remainders not mentioned until Y5 (but I have included in the calculation policy in Y4)

- **Fractions (including decimals)-** add and subtract fractions with the same denominator where the answer could be more than one

- **Measurement-** Perimeter expressed algebraically (non-statutory guidance); relate area to arrays and multiplication (as well as by counting squares); convert between analogue and 12 hr **and 24hr Clocks;** more emphasis on the conversion of units

- **Geometry (properties of shapes)-** classify different triangles and quadrilaterals; identify acute and obtuse angles

- **Geometry (position and direction)-**co-ordinates in the first quadrant; compass points not included

- **Statistics (data handling)-**interpret discrete and continuous data (including using appropriate graphical methods)

Year Five

- **Number-** read, write, and compare numbers to 1,000,000 and determine the value of each digit; read Roman numerals to 1000 (M) and recognise dates written in this form

- **Addition and Subtraction-**no significant change except formal written methods an expectation (previous curriculum referred to efficient written methods); no reference to calculators (except in introduction)

- **Multiplication and Division-**long multiplication (of numbers with up to 4 digits) using the formal written method; short division (of numbers with up to 4 digits) using the formal written method; remainders introduced (previously in Y2!!); no reference to calculators (except in introduction); prime numbers (previously Y6); an expectation that all multiplication and division facts are known to 12x12 by the end of Y4

- **Fractions (including decimals and percentages) -** compare and order fractions whose denominators are all multiples of the same number); add and subtract fractions with the same denominator and denominators that are multiples of the same number; multiply fractions and mixed numbers by whole numbers (supported by materials and diagrams); recognise and use thousandths (decimals with 3 dp)

- **Measurement-** imperial units of measurement (approximate equivalence to metric measures); volume introduced; telling the time, including 24hr clock not referenced (higher expectation now in Y3/4)

- **Geometry (properties of shapes)-**angles at a point total 360°; regular and irregular polygons introduced; reflex angles

- **Geometry (position and direction)-**co-ordinates only referenced in non-statutory guidance (now in Y4)

- **Statistics (previously called data handling) -** reading timetables referenced here

- (not under heading of measures/time); no probability

Year Six

- **Number-** read, write, and compare numbers to 10,000,000 and determine the value of each digit
- **Addition and Subtraction-**no reference to addition and subtraction, except for solving multi-step problems; no reference to calculators (except in introduction)
- **Multiplication and Division-** formal methods of long division (previously in Y7); no reference to calculators (except in introduction)
- **Fractions (including decimals and percentages) -** add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions; multiply simple pairs of proper fractions
- **Ratio and proportion-**higher priority/more coverage given to this than previously; ratio notation used (previously in Y7)
- **Algebra-** previously a level 5/6 objective; NB non-statutory guidance makes reference to problems and investigations
- **Measurement-** area of parallelograms and triangles; formula (in words or symbols) for volume; convert between miles and kilometres
- **Geometry (properties of shapes) -** know parts of a circle; nets introduced (previously introduced in Y4); vertically opposite angles (previously in Y7)
- **Geometry (position and direction)-**no significant changes
- **Statistics (data handling)-**interpret and **construct** pie charts; calculate and interpret mean average (previously Level 6); no probability

Key Changes Overview

- Greater emphasis on the use of large numbers
- Many objectives previously taught moved to the year group below
- Roman numerals from Y3
- Standard methods of calculation introduced earlier (by the <u>end </u>of Y3)
- Standard methods of long x by end of Y5 and ÷ by end of Y6
- Multiplication tables increased to 12x12 (by the end of Y4)
- Addition and subtraction of fractions (from Y3)
- Multiplication and division of fractions (from Y5)
- Time taught at a faster pace e.g. tell the time to the nearest five minutes in Y2; introduction of 24 hour clock in Y3
- Greater emphasis of using formula for finding area and volume (Y6)