Year 5 – Phase 1

Place Value

-be able to write, order and compare numbers up to 1 000 000 and determine the value of each digit

-be able to round whole numbers to the nearest 10, 100, 1000, 10 000 and 100 000

Addition and subtraction

-be able to add and subtract whole numbers with more than 4 digits using formal written methods

-be able to add and subtract numbers mentally with increasingly large numbers

Multiplication and Division

-be able to identify multiples of a number

-be able to identify factors of a number

-be able to find common factors of two numbers

-be able to multiply and divide whole numbers by 10, 100 and 1000

-be able to use the formal methods of column addition and subtraction with more than 4 digits

Fractions

-be able to order and compare fractions by converting to the same denominator

-be able to convert from mixed order numbers to improper fractions

-be able to convert from improper fractions to mixed order numbers.

-be able to add and subtract fractions with the same denominator

Measurement

-be able to convert between different units of metric measure (e.g. km and metre; cm and m)

-be able to measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres

-be able to calculate and compare the area of rectangles

-be able to solve problems involving converting between units of time

Geometry

-be able to identify 3-D shapes, including cubes and other cuboids, from 2-D representations

-know angles are measured in degrees

-be able to estimate and compare acute, obtuse and reflex angles

-be able to identify angles at a point and one whole turn

Year 5 – Phase 2

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Place Value

-be able to count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000
-be able to count forwards and backwards through 0
-be able to round decimals to the nearest whole number (if applicable to class)
-be able to round decimals to one decimal place (if applicable to class)
-be able to use rounding to check answers to calculations and determine levels of accuracy
-be able to interpret negative number in context

Four Operation

-be able to use rounding to check answers to calculations and determine levels of accuracy
-be able to explain what a prime number is
-be able to explain what prime factor means
-be able to explain what a composite number is
-be able to use the formal method of long multiplication
-be confident using short division
-be able to recognise and use square numbers
-be able to use the formal methods of column addition and subtraction with more than 4 digits

Fractions

-be able to identify, name and write equivalent fractions of a given fraction, represented visually including tenths and hundredths
-start to add and subtract fractions with different denominators
-be able to write decimal numbers as fractions (e.g. 0.71 = 71/100)
-be able to recognise the per cent symbol (%)
-be able to start to solve percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5

Measurement/Geometry

-be able to draw given angles and measure them in degrees
-be able to identify angles on a straight line and know these equate to 180 degrees
-start to use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation, including scaling

Statistics

-be able to solve comparison, sum and difference problems using information presented in a line graph
-be able to complete, read and interpret information in tables, including timetables

Year 5 – Phase 3

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Place Value	Four Operation	Fractions	Measurement/Geometry
-be able to read Roman numerals to 1000 (M) and recognise years written in Roman numeral -be able to solve number problems and practical problems that involve all of the place value objectives	-be able to work out whether a number up to 100 is prime -be able to recall all prime numbers up to 19 -be confident using long multiplication -start to understand the process of long division -be able to multiply and divide whole numbers and decimals by 10, 100 and 1000 -be able to understand what is meant by a cube number -be able to solve multi- step problems in contexts, including understanding the meaning of the equals sign -be able to solve problems involving multiplication and division including scaling by simple fractions and problems involving simple rates	-be able to multiply proper fractions and mixed numbers by whole numbers -be able to recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. -be able to round decimals to the nearest whole number and to one decimal place -be able to read, write, order and compare numbers with up to 3 decimal places -be able to solve problems involving numbers up to 3 decimal places	-understand and use equivalences between metric units and common imperial units such as inches, pounds and pints -be able to estimate volume (e.g. using 1 cm3 blocks to build cubes and cuboids) and capacity -be able to use the properties of rectangles to deduce related facts and find missing lengths and angles -be able to distinguish between regular and irregular polygons based on reasoning about equal sides and angles -be able to identify, describe and represent the position of a shape following a reflection or translation