Geometry – Properties of Shapes

- ☐ draw 2-D shapes using given dimensions and angles
- ☐ recognise, describe and build simple 3-D shapes, including making nets
- ☐ compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons
- ☐ illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
- ☐ recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.

Geometry – Position and Direction

- ☐ describe positions on the full coordinate grid (all four quadrants)
- ☐ draw and translate simple shapes on the coordinate plane, and reflect them in the axes.

Statistics

- ☐ interpret and construct pie charts and line graphs and use these to solve problems
- ☐ calculate and interpret the mean as an average.

Ratio and Proportion

- ☐ solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts
- ☐ solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison
- ☐ solve problems involving similar shapes where the scale factor is known or can be found
- ☐ solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.

Ratio and Proportion

- ☐ use simple formulae
- ☐ generate and describe linear number sequences
- ☐ express missing number problems algebraically
- ☐ find pairs of numbers that satisfy an equation with two unknowns
- ☐ enumerate possibilities of combinations of two variables.

Beech Hill School
Parent Information Sheet
Maths
Year 6

Year 6 end of year expectations:

Number – Number and Place Value

- [ ] read, write, order and compare numbers up to 10 000 000 and determine the value of each digit
- [ ] round any whole number to a required degree of accuracy
- [ ] use negative numbers in context, and calculate intervals across zero
- [ ] solve number and practical problems that involve all of the above.

Number – Addition and Subtraction

- [ ] solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
- [ ] perform mental calculations, including with mixed operations and large numbers
- [ ] use their knowledge of the order of operations to carry out calculations involving the four operations
- [ ] solve problems involving addition, subtraction, multiplication and division
- [ ] use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.

Number – multiplication and division

- [ ] multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication
- [ ] divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context
- [ ] divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context
- [ ] identify common factors, common multiples and prime numbers
- [ ] perform mental calculations, including with mixed operations and large numbers
- [ ] use my knowledge of the order of operations to carry out calculations involving the four operations
- [ ] solve problems involving addition, subtraction, multiplication and division
- [ ] use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.

Number – Fractions

- [ ] use common factors to simplify fractions; use common multiples to express fractions in the same denomination
- [ ] compare and order fractions, including fractions > 1
- [ ] add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions
- [ ] multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $1/4 \times 1/2 = 1/8$]
- [ ] divide proper fractions by whole numbers [for example, $1/3 \div 2 = 1/6$]
- [ ] associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3/8]
- [ ] identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places
- [ ] multiply one-digit numbers with up to two decimal places by whole numbers
- [ ] use written division methods in cases where the answer has up to two decimal places
- [ ] solve problems which require answers to be rounded to specified degrees of accuracy
- [ ] recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.

Measurement

- [ ] solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate
- [ ] use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places
- [ ] convert between miles and kilometres
- [ ] recognise that shapes with the same areas can have different perimeters and vice versa
- [ ] recognise when it is possible to use formulae for area and volume of shapes
- [ ] calculate the area of parallelograms and triangles
- [ ] calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units [for example, mm3 and km3].