 **Threshold Concepts in mathematics – Year 6**

|  |  |
| --- | --- |
| **Threshold concepts** |  |
| **Key concepts ideally learned before Year 6** | **Date** |
| Know times table facts and related division facts to automaticity |  |  |  |
| Add and subtract one-digit numbers to automaticity |  |  |  |
| Double and halve all number accurately, including decimal numbers |  |  |  |
| **Multiplication and division** | **Date** |
| Multiply multi-digit numbers up to 4 digits by two-digits using the formal written method. |  |  |  |
| Divide numbers up to 4 digits by two-digits using the formal written method and interpret remainders. |  |  |  |
| Identify common factors, common multiples and prime numbers |  |  |  |
| Use your knowledge of the order or operations (BIDMAS) to carry out calculations |  |  |  |
| **Fractions** | **Date** |
| Use common factors to simplify fractions; use common multiples to express fractions in the same denomination |  |  |  |
| 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 |  |  |  |
| Divide proper fractions by whole numbers |  |  |  |
| Identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places |  |  |  |
| Recall and use equivalences between simple fractions, decimals and percentages including in different contexts |  |  |  |
| **Geometry** | **Date** |
| Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals and regular polygons |  |  |  |
| Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles |  |  |  |
| Describe positions on the full coordinate grid (all 4 quadrants) |  |  |  |
| **Measurement** | **Date** |
| 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 up to 3 decimal places |  |  |  |
| Calculate the area of parallelograms and triangles |  |  |  |
| **Place Value** | **Date** |
| Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit |  |  |  |
| **Ratio and Proportion** | **Date** |
| Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts |  |  |  |
| **Statistics** | **Date** |
| Calculate and interpret the mean as an average |  |  |  |