|  |
| --- |
|  |

|  |  |
| --- | --- |
| **Steps 4-6** | **Teacher led activities, Multisensory activities, Games**  **Numerical patterns**  **Doubling**  **Halving and sharing**  **Odds and evens** |
| **Y1** | |  | | --- | | **Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.** | |
| **Y2** | **Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers**  **Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the (×), (÷) and (=) signs**  **Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.**  **Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, multiplication and division facts, and problems in contexts.** |
| **Y3** | **Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables**  **Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.**  **Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.** |
| **Y4** | **Recall multiplication and division facts for multiplication tables up to 12 × 12**  **Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers**  **Recognise and use factor pairs and commutativity in mental calculations**  **Multiply two-digit and three-digit numbers by a one-digit number using formal written layout**  **Solve problems involving multiplying and adding, including using the distributive law**  **Multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.** |
| **Y5** | **Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers**  **Know and use the vocabulary of prime numbers, prime factors and composite (non- prime) numbers**  **Establish whether a number up to 100 is prime and recall prime numbers up to 19**  **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**  **Multiply and divide numbers mentally drawing upon known facts**  **Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context**  **Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000**  **Recognise and use square numbers and cube numbers, and the notation (2) and (3)**  **Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes**  **Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign.**  **Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.** |
| **Y6** | **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.**  **Perform mental calculations, including with mixed operations and large numbers**  **Identify common factors, common multiples and prime 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** |