## Cavendish Church of England Primary School

Challenge, Creativity, Compassion: Create a pure heart in me - Psalm 51:10
Maths - Multiplication and Division

| EYFS | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | count in multiples of twos, fives and tens | count in steps of 2,3, and 5 from 0 , and in tens from any number, forward or backward | count from 0 in multiples of $4,8,50$ and 100 | count in multiples of $6,7,9,25$ and 1 000 | count forwards or backwards in steps of powers of 10 for any given number up to 1000000 |  |
|  |  | recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers | recall and use multiplication and division facts for the 3,4 and 8 multiplication tables | recall <br> multiplication and division facts for multiplication tables up to $12 \times$ 12 |  |  |
|  |  |  | write and calculate mathematical <br> statements for multiplication and division using the multiplication tables that they know, including for twodigit numbers times one-digit numbers, using mental and progressing to formal written methods (appears also in Written Methods) | 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 | multiply and divide numbers mentally drawing upon known facts | perform mental calculations, including with mixed operations and large numbers |

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|  |  | show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot |  | recognise and use factor pairs and commutativity in mental calculations (appears also in Properties of Numbers) | multiply and divide whole numbers and those involving decimals by 10 , 100 and 1000 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication ( $x$ ), division $(\div)$ and equals ( $=$ ) signs | write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for twodigit numbers times one-digit numbers, using mental and progressing to formal written methods (appears also in Mental Methods) | multiply two-digit and three-digit numbers by a onedigit number using formal written layout | multiply numbers up to 4 digits by a one- or twodigit number using a formal written method, including long multiplication for twodigit numbers | 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 one-digit number using the formal written method of short division and interpret | divide numbers up to 4-digits by a twodigit whole number using the formal written method of |

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|  |  |  |  |  | remainders | short division where appropriate for the context 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 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | recognise and use factor pairs and commutativity in mental calculations (repeated) | identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. <br> know and use the vocabulary of prime numbers, prime factors and composite (nonprime) numbers <br> establish whether a number up to 100 is | identify common factors, common multiples and prime numbers |

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|  |  |  |  |  | prime and recall prime numbers up to 19 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | recognise and use square numbers and cube numbers, and the notation for squared ( ${ }^{2}$ ) and cubed ( ${ }^{3}$ ) |  |
|  |  |  |  |  |  | use their knowledge of the order of operations to carry out calculations involving the four operations |
|  |  |  |  |  |  | use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy |
| solve problems involving doubling, halving and sharing | solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the | solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, | solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence | solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer | solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes <br> solve problems involving addition, subtraction, | solve addition and subtraction multistep problems in contexts, deciding which operations and methods to use and why <br> solve problems |

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|  | support of the teacher | including problems in contexts | problems in which n objects are connected to $m$ objects | scaling problems and harder correspondence problems such as $n$ objects are connected to $m$ objects | multiplication and division and a combination of these, including understanding the meaning of the equals sign <br> solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates | involving addition, subtraction, multiplication and division |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |

