

| Start Date: | | Pupil: | | | Class Teacher: | | | |
|---|--|----------|----------|----------|----------------|----------|----------|--|
| By this point, children should be able to: | | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 | |
| Milestone 1 | Fluently recall adding and subtracting facts of all numbers to 10 and use these when adding lists of small numbers | | | | | | | |
| | Fluently recall most adding and subtracting facts of all numbers to 20 and use efficient strategies to calculate those not known | | | | | | | |
| | Know and use patterns in adding and subtracting facts for any number to 20 and beyond to recall facts, to organize them systematically, and to check that all combinations have been found | | | | | | | |
| | Use known adding and subtracting facts to derive facts to 30 | | | | | | | |
| | Explain how three related numbers are connected through the inverse relation and write all the related adding and subtracting facts | | | | | | | |
| | Use understanding of equivalence, the '=' symbol and knowledge of the inverse relation between adding and subtracting to solve problems where the o symbol represents an unknown number | | | | | | | |
| | Give a sensible estimate of numbers of more than 100 objects | | | | | | | |
| | Count aloud across multiples of 100 and multiples of 1000 | | | | | | | |
| | Read, write and build (with apparatus) 2- and 3-digit numbers | | | | | | | |
| | Relate grouping and place value notation to say the value of each digit in a 3-digit number | | | | | | | |
| Milestone 2 | Understand the use of zero as a place holder | | | | | | | |
| | Know that multiples of 10 and 100 are important milestones on the number line | | | | | | | |
| | Count forwards and backwards in sequences of multiples within their working range | | | | | | | |
| | Recognize when a given number is a multiple of 2, 3, 4, 5, 8, or 10 (at this stage a few children may recognize common multiples but this is not a milestone) | | | | | | | |
| | Notice patterns in sequences of multiples, explain the rule for the sequence and use this to find missing numbers | | | | | | | |
| | Know how to adjust calculations and compensate when adding and subtracting 9 and when to use this relationship | | | | | | | |
| | Recall and use adding and subtracting facts to 10 and the bridging strategy in any adding and subtracting calculations that involves crossing multiples of 10, and explain the steps they have taken | | | | | | | |
| | Understand that multiplying is a form of calculating used instead of repeated adding and recognize when they need to multiply to solve a problem | | | | | | | |
| | Read multiplying number sentences | | | | | | | |
| Read and write multiplying sentences using the 'x' symbol, model them with structured apparatus showing understanding of the word 'product' | | | | | | | | |

| By this point, children should be able to: | | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|---|--|----------|----------|----------|----------|----------|----------|
| Milestone 3 | Understand relative values of numbers to 1000, including recognizing the idea of a range of numbers and use of symbols ' $-$ ', ' $<$ ' and ' $>$ ' for labelling a range of numbers | | | | | | |
| | Partition numbers up to 1000 into hundreds, tens and units and to derive other ways of partitioning them | | | | | | |
| | Relate pounds and pence notation to hundreds, tens and units | | | | | | |
| | Use knowledge of partitioning to solve money problems | | | | | | |
| | Relate knowledge of patterns on a 100 square to an array for 1000 and use patterns when finding numbers in different arrays and number squares | | | | | | |
| | Recall most multiplying facts of 2, 3, 4, 5, 8, and 10 multiplying tables | | | | | | |
| | Know and use the commutative property of multiplying | | | | | | |
| | Represent multiplying problems with structured apparatus and arrays | | | | | | |
| | Know that changing the order of numbers in multiplying problems does not change the product | | | | | | |
| | Recognize that dividing can be expressed as finding 'how many groups are there in ... ?' | | | | | | |
| | Read, build with structured apparatus, and write dividing number sentences using the ' \div ' symbol | | | | | | |
| | Notice and explain the inverse relation between dividing and multiplying and know that they can use multiplying facts to derive dividing facts | | | | | | |
| | Explain and interpret a realistic context as one involving either 'multiplying' or 'dividing' and use the inverse relation between multiplying and dividing when solving problems | | | | | | |
| | Know that multiplying has a commutative property and use this to help when solving dividing questions | | | | | | |
| | Interpret a remainder as what is left after grouping | | | | | | |
| Use fluent recall of adding and subtracting facts to 10 when adding and subtracting multiples of 10 and multiples of 100, first whole tens or whole hundreds moving on to add whole tens and whole hundreds to 2- and 3-digit numbers | | | | | | | |

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|--|--|----------|----------|----------|----------|----------|----------|
| Milestone 4 | Use knowledge of sequences of multiples to label intervals | | | | | | |
| | Use knowledge of number relationships to read values in-between marked intervals | | | | | | |
| | Count in multiples of 25 and 50 | | | | | | |
| | Find halfway between two multiples of 10 and two multiples of 100 | | | | | | |
| | Round any 2- or 3-digit number to the nearest 10 or 100 | | | | | | |
| | Record work systematically in order to quickly spot patterns | | | | | | |
| | Explain how they are using place value and known number facts to solve similar calculations | | | | | | |
| | Use knowledge of equivalence and number relationships to adjust numbers involved in a variety of calculating situations and explain their reasoning | | | | | | |
| | Use fluent recall of doubles of numbers to 10 when solving problems that involve doubling and halving higher numbers | | | | | | |
| | Use fluent recall of adding and subtracting facts of 10 when finding complements to 100 | | | | | | |
| | Develop fluent recall of many facts from 2, 3, 4, 5, 8 and 10 times tables | | | | | | |
| | Recognize that some times tables have multiples in common | | | | | | |
| | Use doubling and halving as a strategy for deriving related multiplying facts between the 2, 4 and 8 times tables and between the 5 and 10 times tables | | | | | | |
| | Know that we use dividing to solve problems involving sharing as well as those involving grouping | | | | | | |
| | Know that there can be remainders in sharing situations | | | | | | |
| Milestone 5 | Write dividing sentences in response to problems illustrated by arrays, Numicon Shapes or number rods | | | | | | |
| | Use the inverse relation between multiplying and dividing when solving sharing problems | | | | | | |
| | Know that finding a constant difference is a useful strategy for finding the rule for a sequence | | | | | | |
| | Choose whether a mental or column method is the most appropriate before solving different adding and subtracting problems | | | | | | |
| | Use rounding when making a reasonable estimate of the possible answer to an adding or subtracting problem | | | | | | |
| | Use partitioning into hundreds, tens and units as a strategy for adding and subtracting 2- and 3-digit numbers | | | | | | |
| | Use structured apparatus when adding and subtracting 2- and 3-digit numbers to show understanding of how these are partitioned, regrouped, recombined or redistributed and can transfer this to a written method of recording in columns | | | | | | |
| | Illustrate mental strategies for adding and subtracting 2- and 3-digit numbers on an empty number line | | | | | | |
| | Add or subtract amounts of money over £1 using a written method | | | | | | |
| | Use the inverse relation between adding and subtracting to check solutions to calculations | | | | | | |
| | Illustrate scaling up and ratio problems with structured apparatus and use the language of scaling and ratio to explain their solutions | | | | | | |
| Make general statements about what happens when multiplying and dividing by 10 | | | | | | | |
| Illustrate and find solutions to multiplying and dividing problems involving teen numbers using structured apparatus and recall of facts | | | | | | | |

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|-------------|--|----------|----------|----------|----------|----------|----------|
| Milestone 6 | Connect ordinal number names with names for fractions and understand that the denominator (i.e. the name of the fraction) tells us how many parts a whole has been divided into and the numerator tells us how many of those parts are represented | | | | | | |
| | Fluently recall double and half facts and use these to find halves and quarters of numbers within their working range | | | | | | |
| | Make connections between unit fractions as operators and division by integers (e.g. connect halving and quartering with dividing by 2 and 4, and finding thirds with dividing by 3) | | | | | | |
| | Interpret remainders as fractions and notice that the context will affect how we deal with the remainder when dividing odd numbers into two or four parts | | | | | | |
| | Differentiate between finding half of a number and finding how many halves are in a number | | | | | | |
| | Know that fractions have places on the number line between whole numbers (integers) | | | | | | |
| | Know that the greater the number of parts a number is divided into, the smaller each of the parts becomes | | | | | | |
| | Know that half can be represented by different equivalent fractions | | | | | | |
| | Illustrate written fractions with apparatus and can write a fraction in response to seeing it built with apparatus | | | | | | |
| | Add and subtract fractions with the same denominator within one whole Shape and within one set | | | | | | |
| | Investigate suitable problems and work systematically to show that they have tried and tested all possibilities | | | | | | |
| | Choose efficient recording systems | | | | | | |
| | Express a general statement and explain their reasoning | | | | | | |

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| Total Crosses (Out of 26) | | | | | | |
| Percentage Completed (Total out of 52) | | | | | | |