

# MATHS PROGRESSION:

## Addition and Subtraction

### Key: Counting

Columnar method for calculation

Estimation & rounding

Using and applying number facts to calculations you can solve mentally with greater efficiency

Problem Solving

Reasoning

- ◆ Recognise with fluency number facts to 100
- ◆ Add and subtract numbers. 2-digit by 2-digit addition and 2-digit by 1-digit subtraction. Bridging the 10.
- ◆ Add 3 1-digit numbers, develop intelligent strategies for addition based on number pairs

- ◆ To recognise commutativity with addition equations and missing number equations
- ◆ Gain a deeper understanding of addition and subtraction using different representations and links to real-world examples

### YEAR 2

- ◆ Add and subtract numbers to 10 and 20
- ◆ Identify number pairs/bonds to 10/20; notice patterns and make connections

- ◆ Begin to explore commutativity with numbers to 10 and 20
- ◆ Subtract a variety of single-digit numbers from a number 1-20

### RECEPTION

- ◆ Read, write and solve equations involving addition and subtraction where the equals symbol is placed in a variety of places within the equation
- ◆ Solve one-step problems involving add and sub using objects and different representa-

- ◆ Recognise with fluency number facts within 20
- ◆ Add and subtract numbers within 20 including 2-digit subtract 1 digit

- ◆ Solve non-routine problems where add and sub is applied
- ◆ Add and subtract fractions (where the denominators are the same)

- ◆ Estimate and check calculations using the inverse method
- ◆ Solve two-step addition and subtraction problems in context

- ◆ Add and subtract numbers up to 4-digits using columnar methods
- ◆ Recognise when calculations can be performed mentally
- ◆ Show methods using objects and different representations

### YEAR 4

- ◆ Perform mental calculations with a mixture of numbers and fractions
- ◆ Know the order of calculations and apply accordingly

- ◆ Hone formal written methods for calculation
- ◆ Use rounding and estimation to evaluate solutions critically

- ◆ Solve multi-step problems and reason the methods/solutions applied
- ◆ Apply knowledge of adding and subtracting to real-life examples

### YEAR 6

- ◆ Evaluate methods with sophistication and aptitude
- ◆ Justify and convince methods of efficiency

- ◆ Apply methods to a range of different models
- ◆ Apply knowledge and understanding to non-routine problems and problems out of context

### YEAR 5

- ◆ Add and subtract mentally with increasing larger numbers
- ◆ Use formal written methods for Add and Sub calculations—more than 4-digit numbers

- ◆ Show understanding through different models and other representations
- ◆ Use a range of methods to check solutions and estimate with efficiency

- ◆ Solve multi-step problems, justifying methods to apply
- ◆ Apply knowledge of concept to real-life examples, investigations and non-routine problems

### YEAR 3

- ◆ Add/subtract mentally numbers up to 3-digits recognising when to use mental methods for efficiency
- ◆ Add and subtract numbers up to 3-digits using a formal written method (columnar)

- ◆ Estimate by using and applying rounding to validate calculations
- ◆ Check calculations using the inverse
- ◆ Add and subtract simple fractions within 1 whole (where the denominators are the same)

- ◆ Solve problems of increasing difficulty that involve adding and subtracting (1 or 2 step)
- ◆ Show depth of understanding by representing the calculation method in different ways (CPA)