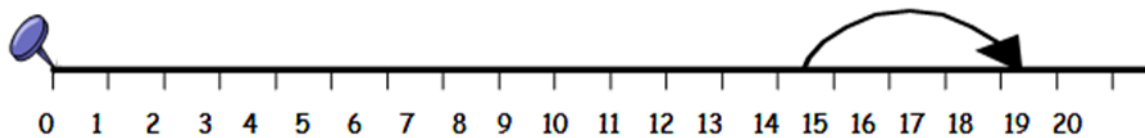


## **Focus: Adding with numbers up to 20.**

Children should use number lines (with the numbers marked on) to add one and two-digit numbers up to 20. Children to start with the greatest number and count on the smaller number.

Fully marked and fully numbered number line - counting on in steps of more than one ( $15 + 4 = 19$ )



## **As well as using a number line, children in Year 1 need to:**

- Use a variety of equipment to solve addition problems, including counting equipment, everyday objects, number tracks, Numicon etc.
- Read and write the addition (+) and equals (=) sign and use them in number sentences.
- Solve addition number sentences and missing number problems:  
 $7 + 4 = ?$ ,  $1 + 2 + 1 = ?$ ,  $? + ? = 9$  etc.
- Use bead strings or bead bars to visualise bridging through 10s e.g.  $8 + 5 =$  can be solved by counting on 2 then counting on 3.

## **Key Vocabulary**

Add, more, plus, and, make, altogether, total, equal to, equals, the same as, double, most, count on, number line, addend, sum

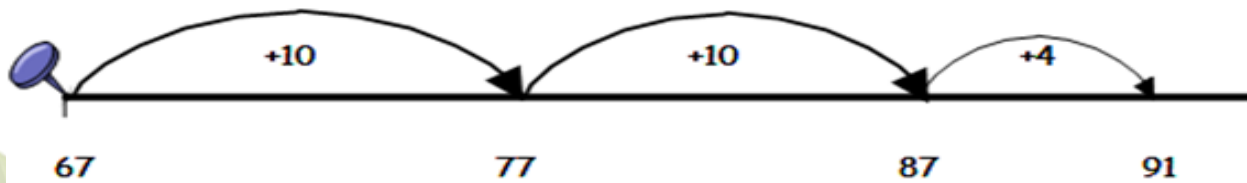
## **Key Skills**

- Reading and writing numbers to 100 in numerals.
- Writing numbers to 20 in words including correct spelling.
  - Counting to and across 100 in ones.
  - Counting in multiples of 2, 5 and 10.
- Solving simple one step addition problems: using objects, number lines and images to support.

### **Focus: Adding with two-digit numbers**

Children should explore and understand how to use blank number lines to add using their knowledge of place value and how to partition numbers in different ways.

$$67 + 24 = 91$$



### **Key Vocabulary**

Add, more, plus, and, make, altogether, total, equal to, equals, the same as, double, most, count on, numberline, sum, tens, units, partition, addition, column, tens boundary, addend

### **Key Skills**

- Add a 2 digit number and units and a 2 digit number and 10s.
  - Add pairs of 2 digit numbers.
  - Add three single digit number.
- Know and show that adding can be done in any order (the commutative law).
  - Recall bonds to 20 and multiple of 10 bonds to 100.
- Count in steps of 2,3 and 5 and count in 10s from any number.
- Understand the place value of 2 -digit numbers (tens and ones).
  - Compare and order numbers to 100 using < > and = signs.
- Read and write numbers to at least 100 in numerals and words.
  - Solve contextual addition problems.

## Focus: Adding with numbers up to three digits

In Year Three, children will move to use the expanded column method and to support this, children will apply their knowledge of partitioning skills.

$$337 + 497 = 834$$

$$\begin{array}{r} 337 \\ 497 \\ \hline 14 \\ 120 \\ 700 \\ \hline 834 \end{array}$$

Once the method is secure, children are now ready to be introduced to the compact column method.

$$\begin{array}{r} 367 \\ +185 \\ \hline 552 \\ \hline 11 \end{array}$$

## Key Vocabulary

Add, more, plus, and, make, altogether, total, equal to, equals, the same as, double, most, count on, numberline, sum, tens, units, partition, addition, column, tens boundary, hundreds boundary, increase, vertical, carry, expanded, compact, addend

## Key Skills

- Read and write numbers to 1000 in numerals and words.
- Add 2 digit number mentally including those that bridge 100.
- Add a 3 digit number and ones, a 3 digit number and 10s and a 3 digit number and 100s mentally.
- Estimate answers to calculations, using the inverse operation to check.
- Solve problems, including missing number problems using number facts and place value.
- Recognise the place value of each digit in a 3 digit number (hundreds, tens and units).
- Continue to practice many different mental addition strategies including adding to the nearest multiple of 10, 100, 1000 and adjusting, using number bonds, using near doubles, partitioning and recombining etc.

### **Focus: Adding numbers with numbers up to four digits**

In Year Four, children will consolidate their use of the column method will be able to comfortable add numbers up to four digits using the compact column method.

If necessary, some children can still be using the expanded column method.

$$4267 + 1584$$

$$\begin{array}{r} 4267 \\ + 1584 \\ \hline 5851 \\ 11 \end{array}$$

### **Key Vocabulary**

Add, more, plus, and, make, altogether, total, equal to, equals, the same as, double, most, count on, number line, sum, tens, units, partition, addition, column, tens boundary, hundreds boundary, increase, vertical, carry, expanded, compact, thousands, hundreds, digits, inverse, addend

### **Key Skills**

- Select most appropriate method: mental, jottings or written and explain why.
- Recognise the place value of every digit in a 4 digit number.
- Round any number to the nearest 10, 100 or 1000.
- Estimate and use inverse operations to check answers.
- Solve 2 step problems in different contexts, picking the correct operation to use.
- Find 100 more or less than a number.
- Continue to use a wide range of mental addition methods.
- Add numbers with up to 4 digits using column addition.



## Focus: Adding numbers with more than four digits

In Year Five, children will now use the column method to add decimal numbers in the context of money and measures. It is important that children have place value skills beyond four digits and fully understand what a decimal number represents.

$$\begin{array}{r} 23415 \\ + 32156 \\ \hline 55571 \\ 1 \end{array}$$

$$\begin{array}{r} 23,481 \\ + 1,362 \\ \hline 24,843 \end{array}$$

## Key Vocabulary

Add, more, plus, and, make, altogether, total, equal to, equals, the same as, double, most, count on, numberline, sum, tens, units, partition, addition, column, tens boundary, hundreds boundary, increase, vertical, carry, expanded, compact, thousands, hundreds, digits, inverse, decimal place, decimal point, tenths, hundredths, thousandths, addend

## Key Skills

- Add increasingly large numbers mentally using an expanding range of strategies.
  - Use rounding to check answers and make estimates.
  - Understand the place value of tenths and hundredths.
- Solve multi step problems in different contexts, deciding which operations and methods to use and explaining why.
  - Read, write, order and compare number to 1 million.
- Round any number to 1 million to the nearest 10, 100, 1000, 10 000 or 100 000.
  - Add numbers with more than 4 digits using column addition.

## **Focus: Adding several numbers with an increasing level of complexity**

In Year Six, children need to use all of the previous adding skills developed to add several numbers with a variety of different decimal places. Many of these problems will be in the context of money or measures.

$$\begin{array}{r} 124.90 \text{ Km} \\ + 7.25 \text{ Km} \\ \hline 132.15 \text{ Km} \\ 11 \end{array}$$

$$\begin{array}{r} 81,059 \\ 3,668 \\ 15,301 \\ + 20,551 \\ \hline 120,579 \\ \hline 1111 \end{array}$$

## **Key Vocabulary**

Add, more, plus, and, make, altogether, total, equal to, equals, the same as, double, most, count on, number line, sum, tens, units, partition, addition, column, tens boundary, hundreds boundary, increase, vertical, carry, expanded, compact, thousands, hundreds, digits, inverse, decimal place, decimal point, tenths, ~hundredths, thousandths, integer, addend

## **Key Skills**

- Solve problems mentally, including those with mixed operations and large numbers, using all the mental strategies learnt in previous years.
- Solve multi step problems in context, deciding which operations and methods to use.
  - Use estimation to check answers to a calculation.
- Read, write order and compare numbers to 10 million and understand the value of each digit.
- Round any whole number to the nearest 10, 100, 1000, 10 000, 100 000, 1 000 000 or 10 000 000
- Round decimal numbers to the nearest whole number.