

The aim is that children use mental methods when appropriate, but for calculations that they cannot do in their heads they use a quick and reliable ( ie efficient) written method accurately and with confidence. **Note: It is important that children's mental methods of calculation are practised alongside the efficient written methods for addition.**

**To add successfully children need to be able to:**

- recall all addition pairs to 9 + 9 and complements in 10;
  - add mentally a series of one-digit numbers, such as  $5 + 8 + 4$ ;
  - add multiples of 10 (such as  $60 + 70$ ) using the related addition fact,  $6 + 7$ , and their knowledge of place value;
- partition numbers into multiples of ten and one in different ways.  
(eg partition 74 into  $70 + 4$  or  $60 + 14$ ).

**To subtract successfully, children need to be able to:**

- recall all addition and subtraction fact to 20;
- subtract multiples of 10 (such as  $70 - 50$ ) using the related subtraction facts, 7-5, and their knowledge of place value;
- partition numbers into multiples of ten and one.

**To multiply successfully, children need to be able to:**

- recall of multiplication facts, particularly 2, 5 and 10 tables.
- partition number into multiples of ten and one;
- add two or more single-digit numbers mentally;
- add multiples of 10 (such as  $60 + 70$ ) using the related addition fact,  $6 + 7$ , and their knowledge of place value.

**To divide successfully, children need to be able to:**

- understand division as repeated subtraction;
- estimate how many times one number divides into another  
- for example, how many fives there are in 35;
- understand and use the vocabulary of division - for example in  $12 \div 3 = 4$ , 3 is the divisor;
- partition numbers into multiples of ten and one;
- recall multiplication and division facts, particularly 2, 5 and 10 tables.

# Marine Park

# First School



## YEAR 2

**Written Methods**  
for the  
**Addition, Subtraction,**  
**Multiplication and**  
**Division of Whole Numbers**

## Glossary of Numeracy Terms

### Complement:

A complement of a number is what needs to be added to it to make a specified value.

Eg, for tens-complements, if you had the number 7, you would need 3 more to make it a 10. So three is the tens-complement of 7, and 7 is the tens-complement of 3.

### Number line:

A straight line in which the numbers are shown as marked points evenly spaced on the line.

### Empty number line:

A line in which children place numbers themselves to help them solve a problem.

### Partitioning:

Splitting a number into separate parts.

Eg 123 can be partitioned to  $100+20+3$  or  $100+23$ .

### Divisor:

A number used to divide another. In the equation  $15 \div 3 = 5$ , 3 is the divisor.

### Addition

Use an empty number line to count on.

Partition numbers into tens and units. Add the tens, then the units, placing in columns. This links to year 3 column addition.

$$48 + 26 =$$

$$40 + 20 = 60$$

$$8 + 6 = 14$$

$$\begin{array}{r} 60 \\ + 14 \\ \hline 74 \end{array}$$

### Subtraction

Use an empty number line to count back

$$36 - 7 =$$

### Multiplication

Use of arrays

$$\begin{array}{ccc} \bullet & \bullet & \bullet \\ \bullet & \bullet & \bullet \\ \bullet & \bullet & \bullet \end{array} \quad 4 \times 2 =$$

$$2 \times 4 =$$

$$7 + 7 + 7 = 21$$

$$7 \times 3 = 21$$

$$3 \times 5 =$$

Then use repeated addition and linking to multiplication.

Use of a number line to support link of repeated addition to multiplication.

### Division

Use a number line for repeated subtraction.

$$12 \div 3 = 4$$

Then place multiples of divisor on number line.