



# Addition Written Calculation Progression

## St Paul's CE VC Junior School



### Language to be used:

#### All

Add, more, plus, altogether, total, makes.  
greater, addition, plus, more, put together

#### Lower Key Stage Two

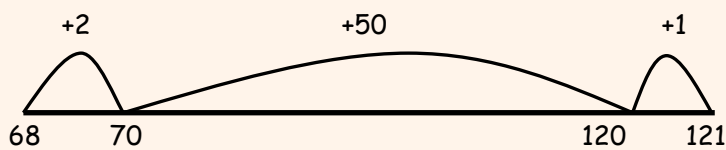
Sum, and

#### Upper Key Stage Two

Positive, increase

### Year Three

- Children to use the number line.
- Start with the smallest number count onto largest number, target the next multiple of ten, count in 10's and the rest



$$68 + 53 = 123$$

- Build on partitioning to develop expanded column addition with two 3-digit numbers.
- Moving to expanded column addition with carrying.

#### *Expanded Column Addition*

$$\begin{array}{r} 400 \quad 30 \quad 6 \\ + 300 \quad 40 \quad 2 \\ \hline 700 \quad 70 \quad 8 \end{array}$$

#### *Expanded Column with Carrying*

$$\begin{array}{r} 400 \quad 60 \quad 6 \\ + 300 \quad 50 \quad 8 \\ \hline 100 \quad 10 \\ \hline 800 \quad 20 \quad 4 \end{array}$$

### Year Four

- Build on expanded method of addition with larger numbers including carrying.

#### *Expanded Column Addition with Carrying*

$$\begin{array}{r} 4000 \quad 400 \quad 60 \quad 8 \\ 1000 \quad 800 \quad 50 \quad 6 \\ \hline 1000 \quad 100 \quad 10 \\ \hline 6000 \quad 300 \quad 10 \quad 4 \end{array}$$

- Develop compact method of addition.
- Move to carrying with compact method.
- Add together numbers with up to 4-digits.

#### *Compact Method of Addition*

$$\begin{array}{r} 342 \\ + 234 \\ \hline 576 \end{array}$$

#### *Compact Method with Carrying*

$$\begin{array}{r} 534 \\ 287 \\ \hline 11 \\ \hline 811 \end{array}$$

### Year Five

- Children to become confident with compact method.
- Add towers of several large numbers.

#### *Add several large numbers with the compact method*

$$\begin{array}{r} 3423 \\ 2225 \\ 2326 \\ + 2247 \\ \hline 112 \\ \hline 10221 \end{array}$$

- Use expanded column addition for money, leading to compact addition.

#### *Money*

$$\begin{array}{r} \pounds 20 \quad \pounds 4 \quad 60\text{p} \quad 4\text{p} \\ \pounds 10 \quad \pounds 8 \quad 70\text{p} \quad 3\text{p} \\ \pounds 10 \quad \pounds 1 \\ \hline \pounds 40 \quad \pounds 3 \quad 30\text{p} \quad 7\text{p} \end{array}$$

#### *Compact Method*

$$\begin{array}{r} \pounds 24.64 \\ \pounds 18.73 \\ + \pounds 11. \\ \hline \pounds 43.37 \end{array}$$

- Add together numbers with more than 4 digits.

### Year Six

- Children to use compact method to add several numbers including decimal numbers.

$$\begin{array}{r} \pounds 24.64 \\ \pounds 28.78 \\ + \pounds 22.26 \\ \hline \pounds 11.1 \\ \hline \pounds 75.68 \end{array}$$

$$\begin{array}{r} 56432 \\ 32572 \\ 34725 \\ \hline 111 \\ \hline 123729 \end{array}$$

- Children to solve addition multi-step problems in context.

A grocer sold 2327 bags of sweets on Monday, 335 bags on Tuesday and 1228 bags on Wednesday. How many did they sell in those three days?

$$\begin{array}{r} 2327 \\ 0335 \\ 1228 \\ \hline 2 \\ \hline 3890 \end{array}$$

