

Long Ridings Addition Policy

Step 1

- Recognise each numeral and be able to count out a corresponding number of counters.
- Order numbers and understand 'larger' and 'smaller'.
- Conservation of number (ability to hold the largest number in head and count on to the total).
- Use place value to break down the numbers into tens and units, adding these together separately (mental strategy).
- Begin to use a number line (or 100 square) to add on or jump forward.
- Informal jottings and practical apparatus.
- **TARGET: Learn addition facts to 10 then 20.**

A handwritten number line showing the addition of 28 and 12. The number 28 is written on the left, and 40 is written on the right. A curved arrow starts at 28 and jumps to 38, labeled '+10'. A second curved arrow starts at 38 and jumps to 40, labeled '+2'. The number 38 is written below the line.

Examples of suggested resources:

Numicon

Bead strings

A number line to 20 (or 100 square) to count on or jump forward to add.

A blank number line

Step 2

- Informal jottings and practical apparatus.
- Continue to partition numbers into tens and units, then into hundreds, tens and units.
- Continue to use a blank number line to count on from the largest number.
- Use practical problem solving and investigations to support and extend additions.
- **TARGET: Know addition and subtraction facts to 20.**

Handwritten calculations showing the partitioning of 28 and 12 into tens and units. It shows: $28 + 12 = 40$, $20 + 10 = 30$, $8 + 2 = 10$, and $30 + 10 = 40$.

Examples of suggested resources:

Numicon

Dienes apparatus

Place value counters

Place value cards

Number lines (or 100 square) to count on or jump forward to add.

A blank number line

Step 3

- An understanding of place value or tens and units.
- Jottings still used.
- Introduction of vertical methods begin when children are in year 3.
- The expanded form of the vertical layout is very important to show understanding.
- Carrying is not introduced until all other forms are handled competently, introducing 'adjustments' like this gradually.

Handwritten vertical addition showing 45 plus 23 equals 68. The numbers are aligned by place value, and the result 68 is written below a horizontal line.

Examples of suggested resources:

Numicon

Dienes apparatus

Place value counters

Place value cards

Step 4

- Place value thoroughly understood.
- Don't ignore informal strategies (important for mental calculations).
- Introduce concept of 'carrying' into vertical form in Yr4.
- Expect to estimate a 'sensible' answer.

Handwritten vertical addition showing 587 plus 475 equals 1062. The numbers are aligned by place value, and the result 1062 is written below a horizontal line. A '1' is written above the 0 in the thousands place, indicating carrying.

Examples of suggested resources:

Numicon

Dienes apparatus

Place value counters

Step 5

- Don't ignore informal strategies
- Choose when to use formal written methods and when to use mental methods.
- Extend vertical method to larger numbers of digits and decimals when appropriate.

Examples of suggested resources:

Numicon

Dienes apparatus

Place value counters