

Long Ridings Multiplication Policy

Stage 1

- Develop confidence of grouping and repeated addition to work out simple table facts.
- Use lots of practical equipment and jottings, including 'arrays'.
- Learn to count up and back in 2, 5 and 10s.
- Chanting/acting/rehearsal of basic table facts.

Examples of suggested resources:

Numicon

Bead strings

A number line to 20 (or 100 square) to count on or jump forward in groups (repeated addition).

Multilink or other 'interesting objects'

Handwritten notes showing simple multiplication facts and their sum: $10 \times 3 = 30$, $4 \times 3 = 12$, and $30 + 12 = 42$.

Stage 2

- **Target: Know 2, 3, 4, 5, 6 and 10 times tables.**
- Jottings (mental methods) and practical resources.
- Use these facts to work out unknown multiplications (e.g. doubling to calculate $\times 4$).
- Use practical problem solving and investigations to support learning of tables.

Examples of suggested resources:

Numicon

A number line to 20 (or 100 square) to count on or jump forward in groups (repeated addition).

Multilink or other 'interesting objects'

Times table square

Games which encourage counting or calculation practice (e.g. fizz buzz, bingo, multiplication cards)

Handwritten grid method for 20×7 and the sum $140 + 21 = 161$.

Stage 3

- **Target: Know all times tables.** (By the end of Yr4)
- Jottings still used (mental methods).
- Introduction of grid method when children are in year 3/4.
- Extend grid method to $TU \times TU$.

Examples of suggested resources:

Numicon

Times table square

Place value counters

Handwritten grid method for $23 \times 7 = 161$.

Stage 4

- **Target: Multiplication by 10 and 100.**
- Understand multiplying by 10 as shifting the digits to the left.
- Don't ignore informal strategies (mental calculations).
- Introduction of formal vertical method for $TU \times U$ (including concept of 'carrying')
- Extend to formal vertical form for $HTU \times U$
- Introduce 'adjustments' like this gradually.

Examples of suggested resources:

Numicon

Times table square

Sliding place value cards

Place value cards (arrows)

Place value counters

Handwritten vertical multiplication for $327 \times 48 = 15696$.

Stage 5

- **Target: Decimal multiplication**
- Don't ignore informal strategies (mental strategies).
- Extend formal vertical method to $HTU \times TU$
- Introduce decimals when appropriate using the strategies above. (Ensure practice of single digit \times one digit decimal is done first, i.e. 3×0.4 ; or, better still, this number bond target is met.)
- The expanded form of the vertical layout is very important for more complex multiplications.
- Introduce 'adjustments' like this gradually.
- If necessary, children remove the decimal and then add it back, using their knowledge of place value to do so, for example to calculate 3.5×5.6 .

Examples of suggested resources:

Numicon

Times table square

Place value counters

Place value cards (arrows)

Sliding place value cards