Lesson 1 NUMBER

Place value to 999 — re-anchor hundreds, tens and units

CURRICULUM ALIGNMENT

NUM.PVT.3 explore equivalent numerical expressions of numbers using the base ten system.

INTERACTIVES Place Value Blocks (Dienes) · challenge, display, explore

LESSON ARC

Open with 305 alone on the board and let pupils argue which digit works hardest and whether the zero earns its place. Build 247, then 408 and 530 with the place-value-blocks interactive, pausing each time on the empty column. Pupils take turns building numbers at the board, then sketch H-T-U columns in their copybook for 247, 408, 530, 999. The Student Activity Book consolidates reading and building three-digit numbers at the desk.

TEACHING MOVES

1. **Getting Started.** Display 305 on its own, give five seconds of quiet think-time, then take three hands-up answers — not call-outs. Steer the talk to the zero: ask 'what would 35 look like written down, and is that the same as 305?' so pupils surface why the zero matters before any blocks appear.
2. **Watch and Notice.** Build each number on the place-value-blocks interactive one at a time, naming the column out loud — 'two hundreds, four tens, seven units' — and have the class read it back. On 408 press 'why can't we just write 48?'; on 530 do the same reasoning at the units end. Name the three-column layout 'the place-value mat' the first time so pupils have the word for the next step.
3. **Try It Together.** Call 362, 207, 640, 300 in turn and send a different pupil to the board for each — four pupils across the round. After each build ask the class 'does every column match the digit?' Watch for a pupil building 207 leaving the tens column empty and reading it as 27; revoice on the spot.
4. **Sketch the Columns in Your Copy.** Pupils sketch and label H, T, U columns and write 247, 408, 530, 999 one under the other, reading each aloud after writing. Walk the room glancing at the zeros in 408 and 530 — no marking, this is copybook practice.
5. **Class Challenge.** Run the bank 162 → 308 → 740 → 909 briskly — the board-pupil reads each column aloud, the class confirms, then you tap the on-screen Check tick as your 'yes, that's it'. Keep it consolidation, not re-teaching; just ask a quick 'what's tricky about the zero here?' on 308, 740 and 909.
6. **What Did We Notice?.** Ask what has to happen to go one more past 999. Listen for 'we need a new column' or 'it rolls over' and revoice a strong answer — but do not teach the thousands column today; let the curiosity land as a bridge forward.

COMMON MISCONCEPTIONS

⚠ A pupil building 207 leaves the tens column empty altogether and reads it as 'twenty-seven' — the zero has vanished and the 2 has slid down to the tens.

Pause the build. Point at the empty tens column on the place-value mat and revoice: 'the zero is holding the tens place so the 2 stays in the hundreds.' Have the pupil read each column aloud — two hundreds, zero tens, seven units.

⚠ Pupils say the units digit is the most important in 305 because it's the biggest digit on show, ignoring its column.

Build 305 with blocks beside the question — three hundred-flats dwarf the five single units. 'It's not the size of the digit, it's the column it sits in.' Have a pupil point to the hundreds column and name its value.

⚠ When reading 909 aloud, pupils run the two nines together as 'ninety-nine' and drop the empty tens. Slow the read column by column on the mat: 'nine hundreds, zero tens, nine units.' Cover the units flat with your hand so they read the hundreds and the held tens place first, then reveal.

DIFFERENTIATION

EMERGING

- Pre-draw the H, T, U column labels in the copybook so these pupils only place the digits, not invent the structure.
- Stay with all-columns-filled numbers (162, 362) at the board for these pupils before any zero appears.

DEVELOPING

- After the copybook sketch, give a number with two zeros — 500, then 700 — and ask which columns are holding empty places and why.
- Pose a missing-digit line on the mat: 'H is 4, T is 0, U is 6 — what's the number?' then reverse it.

PROFICIENT

- Hand these pupils 909 and ask them to write every three-digit number that reads the same forwards and backwards, then explain on the place-value mat why the middle digit is the free one — or pull them ahead into the Student Activity Book page.

↗ **Cross-curricular:** Tie to Geography — pupils read three-digit heights of Irish hills (e.g. Bray Head at 241 m) and name the value of each digit.

ANSWER KEY

a) Each digit sits in its own column; line them up on the right.

b) A digit's value = the digit × its column.

c) Largest: biggest digit on the left; smallest: smallest non-zero digit on the left.

Q1: 2 (2 ones)

Q2: 4,000 (4 thousands)

Q3: $3{,}772 = 3{,}000 + 700 + 70 + 2$

Q4: 9 (tenths digit of 2.9)