Lesson 15 NUMBER

Written addition of 3-digit numbers with regrouping

CURRICULUM ALIGNMENT

NUM.OPS.3 understand and apply flexibly the four operations; and the relationships between operations.

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 156 + 138 on the board and ask which column will trade. Do the live column-addition by hand first, trading ten ones for one ten, then reveal the place-value-blocks interactive showing the finished total as a check. Pupils take turns at the board for fresh sums, then set out 264 + 158 and 437 + 295 in their copies on squared paper. The Class Challenge runs four GAA-club word problems, hardest last.

TEACHING MOVES

1. **Getting Started.** Write 156 + 138 on the board and give five seconds of silent think-time before taking two or three hands-up answers. Listen for 'the extra ten moves left'; have pupils point to the units column where the first trade lands.
2. **Watch and Notice.** Do the trading live on a column layout first, then reveal the place-value-blocks interactive as the check — the blocks show the final total, not the live trade. Take two hands-up predictions before each reveal. On 308 + 196, say 'the zero is holding the place'; flag 475 + 268 as the hardest with two trades in a row.
3. **Try It Together.** Plan four or five turns in nine minutes. Before each pupil builds, ask the class to predict which columns will trade. Revoice a strong answer: 'so the ten ones become one ten, and the one ten moves left' — the class confirms the carry's position out loud before you check.
4. **Set Out the Sums in Your Copy.** Walk the room glancing at column alignment and carry position — this is practice, not marking. Watch for the carry written in the wrong column or forgotten on the second trade in 437 + 295.
5. **Class Challenge.** Keep the board brisk — pupils take turns, check each answer, class confirms before moving on. As you call each problem, ask 'which of these needs two trades?' and flag the cones problem (467 + 358) as the toughest.
6. **What Did We Notice?.** Ask why the carry always moves left, never right. Revoice: 'the carry moves to the bigger place, because it grew big enough to count there.' Head off any suggestion the carry could go right — that would make the number smaller.

COMMON MISCONCEPTIONS

⚠ Pupils write the full two-digit column total instead of trading — for 6 + 8 they write 14 in the units row rather than 4 carry 1.

Pause and build the units with place-value blocks: fourteen ones won't fit in a single column. Physically trade ten of them for one ten-block and move it left. Then write 4 in the units and the carried 1 above the tens.

⚠ On a second trade the carry gets forgotten — pupils add 247 + 185, carry from the units, but drop the carry when the tens column also makes ten or more.

Slow right down on 247 + 185 and 475 + 268 on the board. After each column, ask the class 'did anything need to move left here?' Make the carry digit visible above the next column before adding it in.

⚠ With 308 + 196 pupils stall on the empty tens, unsure where the carry from the units goes.

Point to the zero and say 'the zero is holding the place — it still counts.' The carried ten lands in the tens column on top of the zero, giving 10 tens, which trades on to the hundreds.

DIFFERENTIATION

EMERGING

- Pre-rule three columns on squared paper so pupils only place digits, not invent the alignment, before they add.
- Stay with single-trade sums (units only, like 156 + 138) in the copybook while the class moves to the double-trade examples.

DEVELOPING

- After the copybook sums, ask pupils to spot before adding which of a given pair will need two trades and to explain how they knew from the columns.
- Give a missing-addend variant: 2_4 + 158 = 422 — what digit is hidden, and does it force a trade?

PROFICIENT

- Once the Class Challenge is done, narrate a harder variant aloud — a three-number column add like 156 + 138 + 119 — and ask whether a column can ever need to carry a 2. Let them reason it out before you confirm.
- Pull fast finishers ahead into the Student Activity Book page rather than onto devices.

↗ **Cross-curricular:** Tie to PE — total the pupils' step-counts from two laps of the school yard and add them in columns, the way the sponsored-walk problem does.

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: 1662

Q2: 819

Q3: 11914

Q4: 23