

Lesson 43 **NUMBER****Where a digit sits: 34 and 43 are not the same**

CURRICULUM ALIGNMENT

NUM.PVT.2a

understand that digits have different values depending on their place or position in a number.

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

WHAT THIS LESSON TEACHES

Where a digit sits in a number decides what it is worth. A digit in the tens place is worth ten times the same digit in the units place.

→ In 43 the 4 means 4 tens (40). In 34 the 4 means only 4 units.

→ In 43 the tens digit is 4, so there are four ten-rods.

MODEL THIS ON THE BOARD

WHICH IS MORE: 34 OR 43?

- 1 Look at the two numbers on the place-value mat: 34 and 43.
- 2 In **34** the digit on the left is **3**, so there are 3 tens.
- 3 In **43** the digit on the left is **4**, so there are 4 tens.
- 4 4 tens is more than 3 tens, so **43** is the bigger number.
- 5 The 4 in 43 is worth 40, but the 4 in 34 is worth only 4.

LESSON ARC

Open with two pupils holding large digit cards 3 and 4 to make 34, then swap to 43 — class votes which is more before any place-value talk. Walk three pairs on the place-value-blocks interactive (34/43, 25/52, 61/16), pointing to the left digit as the tens digit that decides. Pupils rebuild the same pairs on the mat at the board, then circle tens digits in copybook. Class Challenge builds the bigger number of each new pair. Student Activity Book follows for seat practice.

TEACHING MOVES

1. **Getting Started.** Invite two pupils up with the large 3 and 4 cards. Make 34 first, pause for a silent look, then swap to 43. Take three hands-up on which is more — do not explain yet. The hook is the surprise that the same digits changed the number.
2. **Watch and Notice.** Build 34 and 43 with ten-rods and unit cubes side by side. After each pair (34/43, 25/52, 61/16), ask which is more and which digit decided it. Point to the left digit every time you say tens digit. Hold out until a pupil names the tens digit before you move on.
3. **Try It Together.** Call one number of the pair; a pupil builds it on the place-value mat; then call the other. Class says which is more and names the tens digit that decided. Rotate four pupils. Revoice any total-cube counting: 'the tens digit decides first.'
4. **Circle the tens digit in your copy.** Pupils write 34 and 43 in their maths copy and circle the left-hand digit in each. Walk the row — both circles should sit on the tens place. No marking; whole-class copybook check only.
5. **Class Challenge.** Keep board turns brisk. Each target is the bigger number of the pair. If a pupil builds the smaller one, ask the class which digit should have decided it, then rebuild. Hold on 79/97 for a clear tens-first reason — both digits look big.

6. What Did We Notice?. Ask why the 4 in 43 is worth more than the 4 in 34. Push past 'because 43 is bigger' to the place reason. Revoice: 'same digit, different place, different worth.'

COMMON MISCONCEPTIONS

⚠ Pupils count all the blocks and say 34 and 43 are the same because both have seven pieces. Line the ten-rods up first, units second. 'Four rods beat three rods before we even look at the loose cubes.' Rebuild and have the pupil point to the tens column only.

⚠ Pupils say 43 is more 'because 4 is bigger than 3' without saying where the 4 sits. Point at both 4s — one in 43, one in 34. 'Same digit. Which place makes it worth forty instead of four?' Hold for tens place or four tens.

⚠ On 79 and 97, pupils freeze or pick by the units digit because both digits look big. Cover the units column on the mat. Only the tens rods show. 'Nine rods or seven rods — which pile is taller?' Uncover and rebuild the bigger number.

DIFFERENTIATION

EMERGING

- Stay with 34/43 only on the mat — pre-place the ten-rods so the pupil adds only the unit cubes and then points to which side has more rods.
- In copybook, write the two numbers with a light tens-column heading already drawn so circling the left digit has a clear target.

DEVELOPING

- After the copybook circle, add 28 and 82 and ask which digit swapped and by how many tens the value jumped.
- On Class Challenge, after building the bigger number, ask them to name the value of the tens digit in words (five tens, nine tens).

PROFICIENT

- Stretch at the board: give three digits (e.g. 2, 5, 7) and ask which two-digit number they can make is the biggest — and why the tens place locks the answer.
- Fast finishers start the Student Activity Book page while the class finishes the last Class Challenge pair.

➤ **Cross-curricular:** Link to SESE geography — house numbers on an Irish street: 16 and 61 are different doors because the digits sit in different places.

ANSWER KEY

Scaffold: visual check on the page

Q1: 73

Q2: 21 (tens: 2 in 21, 1 in 12)

Q3: 64

Q4: 61 (6 tens > 1 ten)

a) Always : In every two-digit number the left-hand place is the tens place.

b) Never : Swapping the digits changes the value, so 34 and 43 are different.

c) Always : Four tens equal 40, which is ten times four units.

d) Sometimes : It depends which digit was larger to begin with, as with 34 becoming 43 or 43 becoming 34.

EXTENSION SHEET · STRETCH ANSWERS

S1: 40

S2: 80

S3: 90

S4: 40