



INSTRUCTIONAL GUIDANCE: NUMBER SEQUENCE

Teaching guidance & background

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In a nutshell

ENSSA assesses children's ability to use the ordered number sequence through the Missing Number task. Children identify the missing numeral in a counting sequence, drawing on their knowledge of number words, written numerals, and what comes before, after, or between other numbers.

Children first develop a stable counting sequence with small numbers, typically within 10, before extending this knowledge to larger ranges, teen numbers, and transitions across decades.

Foundation

Students identify missing numbers within 20 using counting, visual supports, numeral recognition, and emerging understanding of teen numbers as ten and some more.

Year 1

Students increasingly use number order, counting patterns, and developing tens-and-ones place-value knowledge to identify missing numbers efficiently within 100.

Goal of instruction

The goal of instruction is to move students from identifying missing numbers within small number ranges towards efficiently identifying missing numbers within larger number ranges. Students should develop understanding of number order, counting patterns, and, for larger numbers, emerging Base-10 structure.

What it looks like

Identifying which number comes next or before

- ▶ ____ comes after ____.
- ▶ ____ comes before ____.

Completing missing-number sequences within 20 and 100

- ▶ The missing number is ____.
- ▶ I counted by ones.
- ▶ I counted on from ____.
- ▶ I counted back from ____.

Identifying missing numbers across decades (e.g. 58, 59, __, 61)

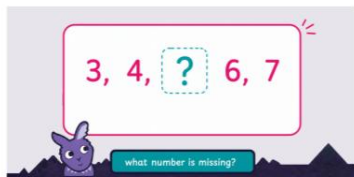
- ▶ After 59 comes 60.
- ▶ The ones changed from 9 to 0, so the tens increased by 1.

Using understanding of tens and ones

- ▶ The tens stay the same, but the ones change.
- ▶ I looked at the tens first, then the ones to determine the order.
- ▶ This number is one more/one less than ____.

Why does it matter?

- Missing-number tasks require students to understand number order, the counting sequence, and relationships between numbers.
- A key part of this skill is **ordinality**: understanding where numbers sit in the sequence and what comes before, after, or between.
- Missing-number tasks help students connect number symbols, number names, and ordered quantities.
- A strong understanding of the ordered number sequence supports students to move beyond rote counting toward more efficient mathematical reasoning.
- Missing-number understanding supports later mathematical skills, including mental number-line development, place-value understanding, and arithmetic fluency.



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Effective number sequence instruction:

- explicitly teaches stable counting order, numeral recognition, number relationships, and, for larger number ranges, place-value patterns
- progresses from smaller to larger number ranges
- gradually increases difficulty through:
 - forward and backward sequences
 - teen numbers and larger number ranges
 - crossing decades
 - different counting increments, e.g. counting by 2s, 5s, or 10s
- supports students to move beyond counting-by-ones towards using before/after/between relationships, tens-and-ones reasoning, and number patterns more efficiently

Teacher Modelling

Teachers explicitly model missing-number tasks using a Teacher Modelling / Guided Practice / Supported Independent Practice approach. Instruction should include modelling:

- ▶ identifying numbers before, after, and between
- ▶ determining whether numbers are increasing or decreasing
- ▶ identifying counting patterns and increments
- ▶ using tens and ones to determine missing numbers across decades

Concrete and visual materials

Number tracks, mathematically accurate hundreds charts, Base-10 materials, and place-value charts should be used to strengthen understanding of ordered number sequences, counting patterns, and decade changes.

Guided practice should include:

- ▶ multiple opportunities to respond
- ▶ immediate feedback
- ▶ regular checks for understanding

This ensures students accurately identify missing numbers using efficient strategies rather than relying solely on counting-by-ones.

Independent practice

Independent practice and review activities should provide repeated practice completing sequences, identifying missing numbers, ordering numerals, and recognising counting patterns across increasing number ranges to build accuracy, efficiency, and long-term retention.

Stem sentences

This section supports consistent teacher language and student explanations. Representations are included because they should be paired with precise stem sentences; the goal is for students to see, say, show, and eventually write the same ordered number relationship.