

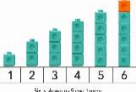
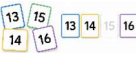
INSTRUCTIONAL GUIDANCE: NUMBER SEQUENCE

Vocabulary, Representations and Stem Sentences

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Representations and stem sentences

Use a range of representations to help students identify the number that comes before, after, or between other numbers. For number sequence work, the most useful supports are number tracks, number paths, number lists or strips, number cards, hundreds charts, and Base-10 materials for decade transitions.

Representation	Purpose	Example teacher prompt	Stem sentence
 Cardinality charts	Connect the number sequence to quantity. Best for early work within 10 or 20.	"Here are 6 cubes. If we add one more, what comes next?"	"___ comes after ___ because it is one more."
 Number track	Shows each number in a fixed, countable place in the ordered sequence. Useful for before, after, between, and covering/building quantities.	"Point to 8. What comes before 8? What comes after 8?"	"___ comes before ___. ___ comes after ___."
 Number paths	Makes each number in the count sequence visible. Useful for covering one numeral and asking students to identify the missing number.	"One number is covered. What is missing? How do you know?"	"The missing number is ___ because it comes after ___ and before ___."
 Number cards	Supports ordering numerals and identifying missing numerals without relying on a fixed chart. Useful for flexible practice.	"Put these number cards in order. Which number is missing?"	"The numbers are increasing by ___. The missing number is ___."
 Mathematically accurate hundreds chart	Supports counting patterns, decade transitions, and identifying numbers before/after within 100.	"What comes after 59? What changes?"	"After 59 comes 60. The ones reset to 0 and the tens increase by 1."
 Base-10 materials / place-value chart	Supports tens-and-ones reasoning for larger numbers, especially across decades.	"Show 59. What happens if we add one more?"	"59 is 5 tens and 9 ones. One more makes 6 tens and 0 ones, so the number is 60."
 Number list or strip	Shows numerals in order. Useful for quick before/after practice and reading numerals.	"Point to 12. What comes before 12? What comes after 12?"	"___ comes before ___. ___ comes after ___."



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Explicit Instruction Routines

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Learning intention

We are learning to use number order to identify the number that comes before, after, or between other numbers.

Using these routines across Foundation and Year 1

ENSSA assesses this skill through the Missing Number task, where students identify the missing numeral in a counting sequence.

Foundation

Students identify missing numbers within 20 using counting, visual supports, number tracks, number paths, numeral recognition, and emerging understanding of teen numbers as 10 and some more.

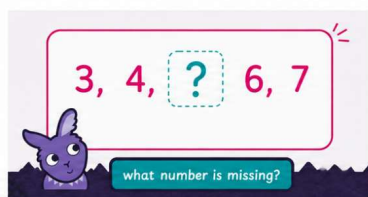
Year 1

Students extend this work to numbers within 100, using number order, counting patterns, hundreds charts, and developing tens-and-ones understanding to identify missing numbers efficiently, including across decade transitions.

The routines are cumulative. Year 1 students may still need brief review using number tracks or number paths within 20 before moving to missing numbers within 100.

Success criteria

- ▶ I can read numerals in a sequence.
- ▶ I can count forwards or backwards by one.
- ▶ I can identify the number that comes before, after, or between.
- ▶ I can work out the missing number in a sequence.
- ▶ I can explain my thinking using number order.

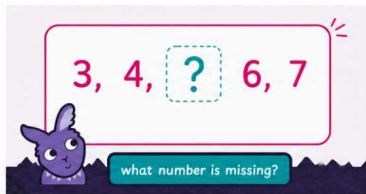


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Explicit Instruction Routines

Explicit instruction routines

Context and Presentation	Teacher Modelling	Guided Practice / Correction Routine	Supported Independent Practice
Building and ordering cube stairs Build a short sequence such as 4, 5, 6, 7, then hide one stair and its numeral.	"I am going to build cube stairs for 4, 5, 6, and 7." Build and order the stairs. "Each stair has one more cube than the stair before it." Remove 6. "The missing number is 6 because it comes after 5 and before 7."	Build 6, 7, 8, 9 with students. Hide 8. "Which stair is missing? What number comes before? After?" Students: "The missing number is 8 because it comes after 7 and before 9." Correction: "7 and one more is 8."	Students build, order, and label cube stairs. A partner hides one stair. Students identify and replace the missing stair, then say: "The missing number is ___ because it comes after ___ and before ___." Fade to numeral-only sequences.
Missing number within 10 using a complete number path Example: 6, 7, __, 9 Number path: 1 2 3 4 5 6 7 8 9 10	"Here is the problem: 6, 7, blank, 9. The number path shows numbers in order. I will count: 6, 7, 8, 9. The missing number is 8 because it comes after 7 and before 9."	Display 4, 5, __, 7 above a number path. "Are these counting forwards or backwards? Which number is missing?" Students point and respond with the full sentence. Correction: "Find 4. Count: 4, 5, 6, 7. What comes after 5 and before 7?"	Students complete missing-number sequences within 10 using the number path. Prompts: "Read the sequence. What comes before the blank? After? What is missing?" Fade support to numeral-only sequences.
Missing teen numbers using a number path or number list Example: 13, 14, __, 16, with a number path or list to 20.	"The sequence is 13, 14, blank, 16. These numbers are counting forwards." Count: "13, 14, 15, 16. The missing number is 15 because it comes after 14 and before 16."	Display 11, __, 13, 14. "Are the numbers counting forwards or backwards? What comes after 11? Before 13?" Students: "The missing number is 12." Correction: If students say 13, point to path: "11, 12, 13, 14. The missing number comes after 11 and before 13."	Students complete teen missing-number sequences using a number path, list, or Base-10 materials. Examples: 10, 11, __, 13; 12, __, 14, 15; 15, 16, __, 18; 17, __, 19, 20. Students say the full stem sentence for each example.
Missing numbers across decades using a hundreds chart and Base-10 materials (Year 1) Example: 48, 49, __, 51	"The sequence is 48, 49, blank, 51. I will check on the hundreds chart: 48, 49, 50, 51." Build 49 with Base-10 materials. "49 is 4 tens and 9 ones. One more gives 10 ones, which makes 1 ten. Now there are 5 tens and 0 ones. That number is 50."	Display 29, __, 31, 32. "Are the numbers increasing or decreasing? What comes after 29? What happens when a number ending in 9 increases by one?" Students: "After 29 comes 30." Correction: Return to hundreds chart and Base-10 model.	Students complete decade-crossing sequences using a hundreds chart, Base-10 materials, or numeral-only prompts. Examples: 38, 39, __, 41; 57, 58, 59, __; 68, 69, __, 71; 89, __, 91, 92. Students explain: "After ___ comes ___. The missing number is ___."
Backward missing-number sequences Example: 10, 9, __, 7 or 16, 15, __, 13, with a number path available.	"This sequence is counting backwards." Point to 10, 9, blank, 7. "I count backwards: 10, 9, 8, 7. The missing number is 8 because it comes after 9 when counting backwards, and before 7. I can check on the number path."	Display 14, 13, __, 11. "Are the numbers counting forwards or backwards? What comes next when we count back from 13?" Students: "12." Correction: "The numbers are getting smaller. Count backwards: 14, 13, 12, 11."	Students complete backward sequences. Examples: 8, 7, __, 5; 12, 11, __, 9; 20, 19, __, 17. Students identify whether the sequence is counting forwards or backwards before writing the missing number.

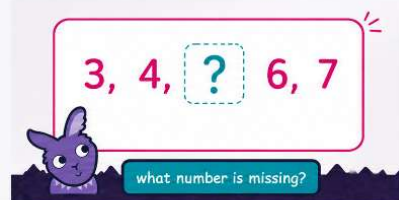


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Explicit Instruction Routines

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Numeral-only sequences with fading support Examples: 6, 7, __, 9 / 13, 14, __, 16 / 48, 49, __, 51	"Now I will solve the sequence without the number path first." Display 6, 7, __, 9. "I read the sequence: 6, 7, blank, 9. I know the number after 7 is 8, and 8 comes before 9. The missing number is 8. Now I can check on the number path."	Display 13, __, 15, 16. Students think first, then check using a number path or list. Correction: "Read the sequence. Decide the direction. Find the number before and after the blank. Then check."	Support faded in stages: (1) Sequence with complete number path. (2) Sequence first, number path for checking. (3) Hidden path available only if needed. (4) Numeral-only sequence. Students continue to use the stem sentence.
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Review and Practice

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Daily review should be brief: about 5–10 minutes. Use numerals first, with representations used to support, check, or explain when students are unsure. Use active participation strategies so all students respond every time. Check the Number Sequence: Resources for a slide bank that can be used to support these review and practice routines.

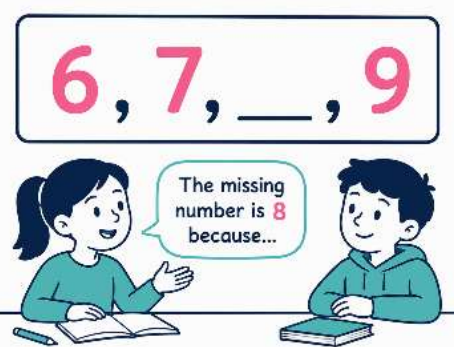
Quick Partners

Purpose

Gives all students repeated practice identifying numbers before, after, and between other numbers. Supports fluent access to the ordered count sequence and prepares students for missing-number tasks.

Use for

Use when students can count within the target range but need more practice applying that knowledge to numeral prompts, before/after questions, and missing-number sequences.



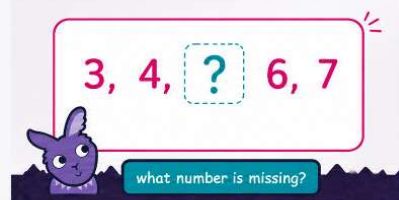
Teacher note

Adapted from the Partner Activity in Early Numbers, Big Ideas. Keep the routine short. Use the visual support only when needed, then return to numerals.

Step	Teacher move	Student response
1. Display the prompt	Display one prompt, e.g. 6, 7, __, 9. Say: "Read the sequence."	"6, 7, blank, 9."
2. Think time	"Think. What number is missing?" Hold up stop hand to prevent calling out.	Students think silently.
3. Partner rehearsal	"Tell your partner: The missing number is __ because __."	"The missing number is 8 because it comes after 7 and before 9."
4. Whole-class response	Signal for a choral response.	Students respond together: "The missing number is 8."
5. Explain	Prompt: "Why?"	"8 comes after 7 and before 9."
6. Confirm or correct	If correct, briefly confirm. If many unsure, show number path and count.	Students track and repeat the correct sentence.
7. Repeat	Display 4–8 more prompts from the current review set.	Students respond every time.

Correction routine

If students are inaccurate, do not continue at speed. Show the number path or list. Say: "Let's check. Find __. Count in order: __, __, __. The missing number is __. Say the sentence with me." For backward sequences: "The numbers are getting smaller, so we count backwards."



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Review and Practice

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Before and After Flash

Purpose

Students practise identifying the number immediately before and after a target number.

Use for

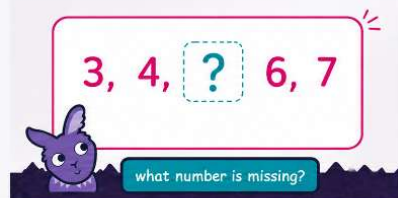
Quick whole-class review of number order within the taught range.



Step	Teacher move	Student response
1. Display	Display a number list or strip. Highlight or point to 6.	Students look.
2. Name target	"What number?" Hold up stop hand, pause, then lower hand.	"6."
3. Before	"What number comes right before 6?"	"5."
4. After	"What number comes right after 6?"	"7."
5. Check	Point and say: "5, 6, 7. 5 comes before 6. 7 comes after 6."	Students track.
6. Repeat	Use 4–6 target numbers from the taught range.	Students respond chorally.

Correction routine

If students are inaccurate, point to the target number and track one space left or right: "This way is before. This way is after. Let's say the numbers together."



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Review and Practice

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Number Order Build

Purpose

Students practise sequencing numerals and seeing the count sequence as an ordered relationship.

Use for

Brief whole-class review of number order.

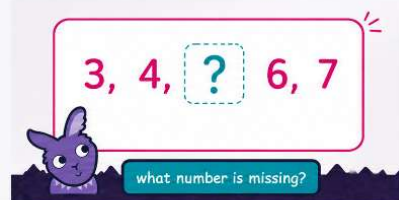
Teacher note

A quick review version of sequencing activities where the teacher lays down number cards in order, asks students to say the number as each card is placed, or has students choose the next number from a mixed pile.

Step	Teacher move	Student response
1. Start	Display number cards in a mixed pile. Place 1 first.	Students look.
2. Prompt	"What number comes next?"	"2."
3. Place	Place 2, or invite a student to place it.	Student places card / class watches.
4. Continue	"What number comes next?"	"3."
5. Read sequence	Point across the completed row. "Read the numbers."	"1, 2, 3, 4, 5..."
6. Quick check	Point to a middle number. "What comes before? What comes after?"	" ___ comes before. ___ comes after."

Correction routine

If a student selects the wrong card, return to the start of the sequence: "Let's count and listen for what comes next."



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Review and Practice

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Cover and Reveal on a Number Path

Purpose

Students practise identifying a missing number when one numeral in an ordered path is covered. This closely matches the reasoning needed for missing-number tasks but keeps the full ordered sequence visible.

Use for

Use when students are still developing accuracy with missing-number prompts and need a visual support.

Teacher note

This is a support routine, not the final goal. Once students are accurate, fade the complete number path and move towards numeral-only sequences.

Step	Teacher move	Student response
1. Display path	Show the number path. Cover 8.	Students look.
2. Read around the blank	Point and say: "Read with me: 6, 7, blank, 9."	"6, 7, blank, 9."
3. Identify before/after	"What comes before the blank? What comes after?"	"7 comes before. 9 comes after."
4. Missing number	"What number is missing?"	"8."
5. Explain	Prompt: "Say the full sentence."	"The missing number is 8 because it comes after 7 and before 9."
6. Reveal	Remove the cover and confirm.	Students check.

Correction routine

If students are unsure, count the local sequence rather than starting from 1: "We do not need to start at 1. We can start at 6 and count on: 6, 7, 8, 9."



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Review and Practice

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Cumulative review

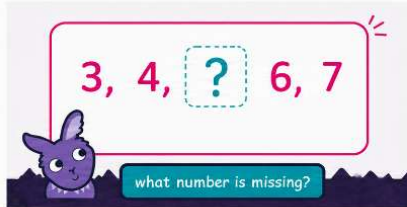
As number-sequence prompts are mastered, they should be practised with reduced frequency. A review routine should include: today's focus, recently taught sequences, older mastered sequences, and a mix of before, after, between, forward sequence, backward sequence, and missing-number prompts.

Example: Foundation review set within 20

Prompt type	Example
After	What comes after 7?
Before	What comes before 12?
Between	What comes between 15 and 17?
Forward missing number	6, 7, __, 9
Backward missing number	10, 9, __, 7
Teen sequence	13, 14, __, 16
Number path cover	Cover 18 on a number path to 20
Numerical-only review	11, __, 13, 14

Example: Year 1 review set within 100

Prompt type	Example
After	What comes after 49?
Before	What comes before 70?
Between	What comes between 58 and 60?
Forward missing number	38, 39, __, 41
Backward missing number	52, 51, __, 49
Decade transition	69, __, 71
Hundreds chart check	Find 59. What comes next?
Numerical-only review	88, 89, __, 91



INSTRUCTIONAL GUIDANCE: NUMBER SEQUENCE

Implementation Summary

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Summary

- The goal is to develop students' understanding of number order, sequence patterns, and place-value relationships so they can identify numbers that come before, after, or between other numbers.
- Students should learn to explain how they identified the missing number, using language such as "___ comes before ___", "___ comes after ___", "___ comes between ___ and ___", and "The missing number is ___ because it comes after ___ and before ___."
- Begin with numbers and sequence types students have already been taught. Progress gradually from simple sequences to larger and more complex sequences involving teen numbers, backward sequences, decade transitions, and place-value reasoning.
- Use numerals first during review so students practise the form used in the ENSSA Missing Number task. Use number paths, number tracks, number lists or strips, number cards, hundreds charts, or Base-10 materials to support, check, or explain when needed.
- Teach students to determine whether numbers are increasing or decreasing, and to identify the counting pattern as tasks become more complex.
- Support students to use tens-and-ones understanding when working with two-digit sequences, especially when crossing decades (e.g. 58, 59, __, 61).
- Use frequent, brief review sessions with both forward and backward sequences. Require every student to respond on every prompt.
- If students are inaccurate, slow down and return to explicit modelling with concrete or visual supports before continuing review.
- If students are accurate but slow, continue brief daily review with cumulative practice so number-sequence knowledge becomes more fluent and reliable over time.
- If a small group remains inaccurate after classwide review, use the same routines in a more explicit Tier 2 format with smaller number ranges, more modelling, more guided practice, and more immediate feedback.
- Instruction should include explicit modelling, guided practice, independent practice, brief daily review, and cumulative review.