Year 3 Maths – Unit 1: Place Value (Lesson Plans)

This pack contains 14 detailed lesson plans for the first unit (Place Value). Each lesson includes: a Fluency starter, a structured CPA main input, guided and independent practice, assessment for learning, and "Deep Dive" worded reasoning/problem-solving questions.

Unit overview

- Unit length: 14 lessons (adapt to 3–4 weeks).
- Key representations: base-10 blocks, place-value counters, place-value chart (H-T-O), number lines (0–100 and 0–1,000).
- Core language: digit, value, hundreds, tens, ones, represent, partition, estimate, compare, order, more/less, interval.
- Daily structure suggestion: 5–8 min Fluency • 10–15 min Input • 10 min Guided • 15–20 min Independent • 8–10 min Deep Dive • 2 min Exit check.

Planning sequence aligns to a 14-step Place Value progression (steps 1–14).

Lesson 1: Represent numbers to 100

Learning objective: Represent and read numbers to 100 using tens and ones.

Success criteria:

- I can represent a two-digit number using tens and ones.
- I can write the number in digits and words.
- I can explain how I know the number of tens/ones.

Resources:

- Base-10 blocks or place-value counters
- Mini whiteboards and pens
- Place value chart (H–T–O)
- Number lines (0–100 / 0–1,000), printed or projected
- 100-square (for Lesson 14)

Fluency starter (5–8 minutes)

- Quick-fire: Show 6 tens and 8 ones (or similar). Pupils write digits + words.
- Fill the gaps: __ tens and __ ones = 47, 83, 65.

- True/False: "70 has 7 ones." Explain.

Main input (CPA) and teaching points (10–15 minutes)

- Concrete: Build numbers with tens rods and ones cubes; swap ten ones for one ten to reinforce structure.
- Pictorial: Draw quick tens-and-ones sketches; introduce place value chart (T/O).
- Abstract: Connect to numeral and words; emphasise that the left digit shows tens.

Guided practice (10 minutes)

- Teacher models 2 examples; pupils build on mini whiteboards.
- Focus questions: "How many tens? How many ones? Why?"

Independent practice (15–20 minutes)

- Task A (core): Represent 6 given numbers (2-digit) using tens/ones drawing; write digits and words.
- Task B (support): Match representations to numerals (provided).
- Task C (stretch): Given a number of tens, write 3 different numbers that fit (e.g., "6 tens").

Deep Dive (worded reasoning/problem-solving questions) (8–10 minutes)

- Sofia built a number using 6 tens and some ones. Her number is between 60 and 70. What could her number be? Explain how you know.
- A two-digit number has 8 ones. It is greater than 50 but less than 70. List all possibilities and justify.
- Tariq says: "If a number has 6 tens then it must be 60." Do you agree? Use examples to prove your answer.

Common misconceptions & teacher prompts

- Confusing digit with value (e.g., thinking 68 has 6 ones). Prompt: "What does the 6 represent?"

AfL & exit check (2–3 minutes)

Exit: Write a number with 5 tens and 2 ones. Explain in one sentence.

Lesson 2: Partition numbers to 100

Learning objective: Partition numbers to 100 in different ways and explain equivalence.

Success criteria:

- I can partition a number into tens and ones.
- I can show different partitions that are equal.
- I can justify whether a partition is correct.

Resources:

- Base-10 blocks or place-value counters
- Mini whiteboards and pens
- Place value chart (H–T–O)
- Number lines (0–100 / 0–1,000), printed or projected
- 100-square (for Lesson 14)

Fluency starter (5–8 minutes)

- Complete: 68 = __ + __; 92 = __ + __.
- How many tens? How many ones? 39, 70, 58.
- Odd one out: 46, 64, 406 (discuss why).

Main input (CPA) and teaching points (10–15 minutes)

- Model partitioning as tens + ones and as "near multiple of 10" (e.g., 68 = 70 – 2).
- Use stem: "___ is the same as ___ because …" to justify equivalence.
- Address misconception: partition parts must total the whole.

Guided practice (10 minutes)

- Work through 3 partitions together; include one incorrect to diagnose.
- Use sentence stems to justify.

Independent practice (15–20 minutes)

- Task A: Partition 10 two-digit numbers as tens + ones.
- Task B: Complete missing-part partitions (e.g., 74 = 50 + __).
- Task C: Prove or disprove equivalence statements (e.g., 68 = 50 + 18).

Deep Dive (worded reasoning/problem-solving questions) (8–10 minutes)

- Mo partitions 68 as 50 + 18. Kai says it is wrong because 18 is not a tens number. Who is correct? Explain.
- Write a number that can be partitioned as 30 + 9 AND also as 20 + 19. What is the number? How do you know?
- Create a "mystery number": It has 7 tens, and when you subtract 3 you get a multiple of 10. What could it be?

Common misconceptions & teacher prompts

- Thinking partitions must be tens/ones only. Prompt: "Do the parts still add to the whole?"

AfL & exit check (2–3 minutes)

Exit: Is 74 = 60 + 14? Yes/No – explain.

Lesson 3: Number line to 100

Learning objective: Locate numbers on a 0–100 number line and identify midpoints.

Success criteria:

- I can locate a number on a 0–100 line.
- I can find a midpoint between two multiples of 10.
- I can explain my strategy.

Resources:

- Base-10 blocks or place-value counters
- Mini whiteboards and pens
- Place value chart (H–T–O)
- Number lines (0–100 / 0–1,000), printed or projected
- 100-square (for Lesson 14)

Fluency starter (5–8 minutes)

- Mark 35, 70, 90 on a blank 0–100 line with 0, 50, 100 labelled.
- What is halfway between 20 and 60? Between 40 and 80?
- Countdown: 100, 90, 80… (in tens) then switch to ones for 5 numbers.

Main input (CPA) and teaching points (10–15 minutes)

- Label landmarks (0, 50, 100) then refine using tens; discuss equal intervals.
- Teach midpoint strategy: "Halfway between 40 and 80 is 60."
- Use counting-on in tens first, then adjust.

Guided practice (10 minutes)

- Class marks numbers on shared line; discuss different placements and correct using equal intervals.

Independent practice (15–20 minutes)

- Task A: Mark numbers on 0–100 line; include non-multiples of 10.
- Task B: Midpoint questions between two tens.
- Task C: Create your own number line puzzle for a partner.

Deep Dive (worded reasoning/problem-solving questions) (8–10 minutes)

- A point is exactly halfway between 40 and 80 on a number line. Another point is halfway between 40 and that halfway point. What is the second point? Explain.

- You are placing 63 on a 0–100 number line with only 0, 50 and 100 labelled. Describe precisely where to put it and why.
- Two numbers are marked on a number line: one is 28 and one is 82. What is the midpoint? How do you know without counting every number?

Common misconceptions & teacher prompts

- Unequal intervals on number line. Prompt: "Are the spaces equal? What does halfway mean?"

AfL & exit check (2–3 minutes)

Exit: What is halfway between 30 and 90? Explain briefly.

Lesson 4: Hundreds

Learning objective: Count in hundreds, understand 10 hundreds = 1,000, and reason about the pattern.

Success criteria:

- I can count in hundreds from any hundred.
- I know 10 hundreds make 1,000.
- I can explain and correct a misconception about 1,000.

Resources:

- Base-10 blocks or place-value counters
- Mini whiteboards and pens
- Place value chart (H–T–O)
- Number lines (0–100 / 0–1,000), printed or projected
- 100-square (for Lesson 14)

Fluency starter (5–8 minutes)

- Count in 100s from 0 to 1,000 (chant).
- Missing hundreds: 300, 400, 500, __, __, __.
- Is "10 hundred" the same as 1,000? Quick discussion.

Main input (CPA) and teaching points (10–15 minutes)

- Use 100-blocks/strips to show 1 hundred; stack to 10 hundreds; link to 1,000 cube/picture.
- Explicitly teach "ten hundreds = one thousand".
- Discuss language: "10 hundred" is another way to say 1,000, but we usually say one thousand.

Guided practice (10 minutes)

- Choral counting and missing-number sequences; discuss misconceptions about "10 hundred".

Independent practice (15–20 minutes)

- Task A: Count in 100s from different start points.
- Task B: Missing-number sequences and "next three numbers" tasks.
- Task C: Explain in writing why 1,000 is 10 hundreds.

Deep Dive (worded reasoning/problem-solving questions) (8–10 minutes)

- Amir counts: 700, 800, 900, 10 hundred. Explain what he means. Write it another way and justify.
- A number has 9 hundreds and no tens or ones. If you add 100, what happens? Explain using place value.
- Create a riddle: "I am a multiple of 100. I am greater than 450 but less than 800." What numbers fit? Prove.

Common misconceptions & teacher prompts

- Believing 10 hundred is different from 1,000. Prompt: "Write 10 hundreds in digits."

AfL & exit check (2–3 minutes)

Exit: What is 10 hundreds written as a numeral?

Lesson 5: Represent numbers to 1,000

Learning objective: Represent, read and write numbers to 1,000 using hundreds, tens and ones.

Success criteria:

- I can represent a 3-digit number using base-10.
- I can write it in expanded form and words.
- I can match representations to numerals.

Resources:

- Base-10 blocks or place-value counters
- Mini whiteboards and pens
- Place value chart (H–T–O)
- Number lines (0–100 / 0–1,000), printed or projected
- 100-square (for Lesson 14)

Fluency starter (5–8 minutes)

- Match: 300+40+7 ↔ 347; 500+6 ↔ 506; 900+80 ↔ 980.
- Write in words: 205, 470, 999.
- Quick partition: 732 = __ hundreds __ tens __ ones.

Main input (CPA) and teaching points (10–15 minutes)

- Concrete: Build 3-digit numbers with hundreds flats, tens rods, ones cubes.
- Pictorial: Base-10 drawings and place value chart (H-T-O).
- Abstract: Expanded form (e.g., 347 = 300 + 40 + 7) and words.

Guided practice (10 minutes)

- Build-and-write: teacher shows blocks; pupils write numeral, expanded form, words.

Independent practice (15–20 minutes)

- Task A: Represent and write 8 three-digit numbers; expanded + words.
- Task B: Match blocks/expanded/words/numerals (cut-and-stick).
- Task C: Build the largest/smallest numbers given constraints (digits cards).

Deep Dive (worded reasoning/problem-solving questions) (8–10 minutes)

- A number is made from 3 hundreds, 4 tens and 7 ones. Another number is made from 2 hundreds, 14 tens and 7 ones. Are they equal? Explain.
- Write the smallest 3-digit number with an 8 in it. Now write the largest. Explain your choices.
- A shop has 347 stickers. They pack them in hundreds, tens and ones. Describe three different ways they could display the packs.

Common misconceptions & teacher prompts

- Mixing up 407 vs 470. Prompt: "Where are the tens? Show on H-T-O."

AfL & exit check (2–3 minutes)

Exit: Write 612 in expanded form and words.

Lesson 6: Partition numbers to 1,000

Learning objective: Partition numbers to 1,000 and explain the value of each digit.

Success criteria:

- I can read a 3-digit number from a place value chart.
- I can state the value of a digit.
- I can explain what changes when I add 10 or 100.

Resources:

- Base-10 blocks or place-value counters
- Mini whiteboards and pens
- Place value chart (H–T–O)
- Number lines (0–100 / 0–1,000), printed or projected
- 100-square (for Lesson 14)

Fluency starter (5–8 minutes)

- Value focus: In 509 what is the value of 9? In 843 value of 8?
- Add 10: 319→__ ; 590→__ ; 999→__.
- Explain: Why does adding 10 change the tens digit?

Main input (CPA) and teaching points (10–15 minutes)

- Read numbers from an H-T-O chart; highlight digit vs value.
- Model adding 10 and show what changes on the chart; connect to "one more ten".
- Use "I notice…/I know…" reasoning prompts.

Guided practice (10 minutes)

- Digit value focus: choose a number, ask value of digit; add 10/100 and explain change.

Independent practice (15–20 minutes)

- Task A: Fill in H-T-O charts from numerals and vice versa.
- Task B: Digit value questions; add 10/100 and describe changes.
- Task C: "What number am I?" riddles using digit values.

Deep Dive (worded reasoning/problem-solving questions) (8–10 minutes)

- The digit 9 in a number is worth 90. The number has 5 hundreds. What could the number be? Give at least 3 examples.

- You add 10 to a number and only the tens digit changes. What does that tell you about the ones digit? Explain.
- A teacher says: "Adding 10 always makes the number bigger by one ten, so the hundreds digit never changes." Is that always true for numbers to 1,000? Explain.

Common misconceptions & teacher prompts

- Adding 10 and changing the ones. Prompt: "What stays the same when we add one ten?"

AfL & exit check (2–3 minutes)

Exit: In 709, what is the value of the 7? What is 709 + 10?

Lesson 7: Flexible partitioning of numbers to 1,000

Learning objective: Use flexible partitioning to show the same number in multiple equivalent forms.

Success criteria:

- I can partition a 3-digit number in at least 3 different ways.
- I can spot whether a partition is equivalent.
- I can create my own valid partition.

Resources:

- Base-10 blocks or place-value counters
- Mini whiteboards and pens
- Place value chart (H–T–O)
- Number lines (0–100 / 0–1,000), printed or projected
- 100-square (for Lesson 14)

Fluency starter (5–8 minutes)

- How many ways can you make 482 with hundreds/tens/ones? (1 minute challenge).
- True/False: 482 = 400 + 60 + 22.
- Fill missing: 482 = 300 + __ + 2.

Main input (CPA) and teaching points (10–15 minutes)

- Teach flexible partitioning: regroup 1 hundred as 10 tens; regroup 1 ten as 10 ones.
- Model multiple partitions of one number; keep an equivalence bar model visible.
- Check for errors where pupils change the total while regrouping.

Guided practice (10 minutes)

- Generate 3 different partitions of the same number together; check equivalence with recombining.

Independent practice (15–20 minutes)

- Task A: Give 3 different partitions for each of 3 numbers.
- Task B: Spot incorrect partitions and correct them.
- Task C: Use regrouping (1 hundred = 10 tens) to create unusual partitions.

Deep Dive (worded reasoning/problem-solving questions) (8–10 minutes)

- A pupil writes: 482 = 400 + 60 + 22. Another pupil says it is wrong because 22 is not ones. Who is correct? Prove it.
- Make 482 using only two parts (two addends). What different ways can you do it? Try to find at least 5 and explain.
- A number can be partitioned as 500 + 30 + 7 and also as 400 + 130 + 7. What is the number and why do both work?

Common misconceptions & teacher prompts

- Regrouping changes total. Prompt: "Recombine to check the total stays 482."

AfL & exit check (2–3 minutes)

Exit: Give one unusual partition of 362 (not H+T+O).

Lesson 8: Hundreds, tens and ones

Learning objective: Interpret H-T-O representations and reason about closeness to a benchmark hundred.

Success criteria:

- I can identify the value of digits in H-T-O.
- I can compare closeness to 400/500/600 using distance.
- I can explain with a number line or subtraction.

Resources:

- Base-10 blocks or place-value counters
- Mini whiteboards and pens
- Place value chart (H–T–O)
- Number lines (0–100 / 0–1,000), printed or projected
- 100-square (for Lesson 14)

Fluency starter (5–8 minutes)

- Show H-T-O counters for 480; pupils write number and digit values.
- Which is closer to 500: 480 or 520? Explain in one sentence.
- Quick compare: 408 __ 480; 498 __ 480.

Main input (CPA) and teaching points (10–15 minutes)

- Use number line benchmarks 400 and 500 to reason about closeness.
- Teach distance language: "480 is 20 away from 500 and 80 away from 400."
- Encourage explanation using subtraction or a number line.

Guided practice (10 minutes)

- Benchmark comparisons: decide closer to 400 or 500; justify with distances.

Independent practice (15–20 minutes)

- Task A: Identify number from H-T-O and state digit values.
- Task B: Decide closer benchmark (e.g., closer to 500/600) and justify.
- Task C: Place 3 numbers on a line with 400 and 500 labelled; explain placements.

Deep Dive (worded reasoning/problem-solving questions) (8–10 minutes)

- Is 480 closer to 500 or 400? Prove it using two different methods (e.g., number line and subtraction).

- Choose a number that is closer to 500 than 400 but still has 4 hundreds. Explain your choice.
- A number has 4 hundreds and 8 tens. The ones are missing. What ones digit(s) would make it closer to 500 than 400? Explain.

Common misconceptions & teacher prompts

- Closeness judged by hundreds digit only. Prompt: "How far from 500? How far from 400?"

AfL & exit check (2–3 minutes)

Exit: Is 480 closer to 500 or 400? Give the distance.

Lesson 9: Find 1, 10 or 100 more or less

Learning objective: Find 1, 10 and 100 more/less across boundaries (e.g., 299 → 300).

Success criteria:

- I can find 1, 10, 100 more and less.
- I can explain what happens at boundaries.
- I can check answers using inverse moves.

Resources:

- Base-10 blocks or place-value counters
- Mini whiteboards and pens
- Place value chart (H–T–O)
- Number lines (0–100 / 0–1,000), printed or projected
- 100-square (for Lesson 14)

Fluency starter (5–8 minutes)

- Start number: 299. Pupils compute +1, +10, +100 quickly.
- Start number: 701. Pupils compute -1, -10, -100.
- Spot the mistake: 399 +1 = 310 (why wrong?).

Main input (CPA) and teaching points (10–15 minutes)

- Model boundary crossing: 299 + 1 = 300 (carry across tens/ones).
- Use place value chart to show changes when adding/subtracting 1, 10, 100.
- Introduce checking by reversing the move.

Guided practice (10 minutes)

- Quick-fire more/less across boundaries; pupils explain one example fully.

Independent practice (15–20 minutes)

- Task A: Complete tables of +1/+10/+100 and -1/-10/-100.
- Task B: Boundary crossing questions (e.g., 199, 209, 990).
- Task C: Create a "more/less maze" (sequence of moves) for a partner.

Deep Dive (worded reasoning/problem-solving questions) (8–10 minutes)

- Nina starts at 299 and adds 1, then adds 10, then adds 100. She says her final answer is 409. Is she correct? Explain each step carefully.

- Create a number where "1 more" changes the hundreds digit. Explain why it happens.
- A pupil says: "If you add 100, only the hundreds digit changes." Is that always true? Give an example that proves or disproves.

Common misconceptions & teacher prompts

- Assuming +1 never changes tens/hundreds. Prompt: "What happens at 9, 99, 199, 299?"

AfL & exit check (2–3 minutes)

Exit: 399 + 1 = ? Explain what changed.

Lesson 10: Number line to 1,000

Learning objective: Place and describe numbers on a 0–1,000 number line using known landmarks.

Success criteria:

- I can place a 3-digit number between the correct hundreds.
- I can describe a position using halfway/quarterway language.
- I can justify placement using intervals.

Resources:

- Base-10 blocks or place-value counters
- Mini whiteboards and pens
- Place value chart (H–T–O)
- Number lines (0–100 / 0–1,000), printed or projected
- 100-square (for Lesson 14)

Fluency starter (5–8 minutes)

- Between which hundreds? 680, 750, 902.
- Mark 750 on a line with 700 and 800 labelled.
- Explain: What does halfway mean on a number line?

Main input (CPA) and teaching points (10–15 minutes)

- Use a 0–1,000 line with 0, 500, 1,000 and then 0,200,400,600,800,1000 landmarks.
- Teach "between which hundreds?" as first step, then refine placement using midpoint/quarters.
- Practise describing placement verbally (not just marking).

Guided practice (10 minutes)

- Place numbers between hundreds; describe using midpoint language; peers critique placement.

Independent practice (15–20 minutes)

- Task A: Place numbers on 0–1,000 lines with 0/500/1000 then 0/200/…/1000.
- Task B: Describe positions in words (between, closer to, about halfway).
- Task C: Given a description, generate possible numbers.

Deep Dive (worded reasoning/problem-solving questions) (8–10 minutes)

- You place 750 on a number line from 0 to 1,000. Explain why it must be exactly halfway between 700 and 800.
- A point is between 600 and 700 and is closer to 700 than 600. Give three possible numbers and explain.
- A number is on a number line between 800 and 1,000. It is about a quarter of the way from 800 to 1,000. What could it be? Explain your estimate.

Common misconceptions & teacher prompts

- Placing numbers without identifying the two bounding hundreds. Prompt: "Which hundreds is it between?"

AfL & exit check (2–3 minutes)

Exit: 750 lies between which two hundreds?

Lesson 11: Estimate on a number line to 1,000

Learning objective: Estimate positions and compare closeness using intervals and midpoints.

Success criteria:

- I can estimate a number's position between two hundreds.
- I can decide which benchmark it is closer to.
- I can explain without counting in ones.

Resources:

- Base-10 blocks or place-value counters
- Mini whiteboards and pens
- Place value chart (H–T–O)
- Number lines (0–100 / 0–1,000), printed or projected
- 100-square (for Lesson 14)

Fluency starter (5–8 minutes)

- Halfway: between 600 and 800; between 200 and 400.
- Closer to? Is 680 closer to 700 or 600?
- Estimate: place 735 between 700 and 800 (quick).

Main input (CPA) and teaching points (10–15 minutes)

- Teach estimation as "best location" using intervals and midpoints (e.g., 700 halfway between 600 and 800).
- Model deciding "closer to 700 or 600" by comparing distances to each benchmark.
- Avoid counting in ones—promote rounding/benchmarking thinking.

Guided practice (10 minutes)

- Estimate then justify: pupils choose closer benchmark; explain without ones counting.

Independent practice (15–20 minutes)

- Task A: Estimate missing points on number lines.
- Task B: Closer-to questions using distance reasoning.
- Task C: Explain why an estimate is reasonable/unreasonable.

Deep Dive (worded reasoning/problem-solving questions) (8–10 minutes)

- A number is between 600 and 800. It is closer to 600 than 700. What could it be? Explain using distances.
- Jamie estimates a number's position and says it is 735. The true number is 748. Was Jamie's estimate reasonable? Explain.
- Two numbers are on a number line: one is 680 and one is 720. Which is closer to 700? Prove it.

Common misconceptions & teacher prompts

- Counting in ones to estimate. Prompt: "Use midpoints/benchmarks instead."

AfL & exit check (2–3 minutes)

Exit: Which is closer to 700: 680 or 720? Why?

Lesson 12: Compare numbers to 1,000

Learning objective: Compare numbers to 1,000 using place-value reasoning and inequality symbols.

Success criteria:

- I can compare numbers by hundreds, then tens, then ones.
- I can use <, >, = correctly.
- I can explain which digit decides first.

Resources:

- Base-10 blocks or place-value counters
- Mini whiteboards and pens
- Place value chart (H–T–O)
- Number lines (0–100 / 0–1,000), printed or projected
- 100-square (for Lesson 14)

Fluency starter (5–8 minutes)

- Insert <, >, = : 608 __ 680; 705 __ 570; 909 __ 990.
- Which digit decides first? 608 vs 680.
- Make a number greater than 650 using digits 6,5,0 (one use each).

Main input (CPA) and teaching points (10–15 minutes)

- Rehearse comparison algorithm: compare hundreds, then tens, then ones.
- Use place value counters to make two numbers and physically compare hundreds first.
- Link symbols < and > to a story: "mouth eats the bigger number" (ensure understanding not gimmick).

Guided practice (10 minutes)

- Compare pairs; pupils identify deciding digit; use symbols and spoken sentences.

Independent practice (15–20 minutes)

- Task A: Compare 12 pairs with <,>,= and write a sentence explaining deciding digit.
- Task B: Sort numbers into "greater than 650" etc.
- Task C: Make numbers from digit cards and compare.

Deep Dive (worded reasoning/problem-solving questions) (8–10 minutes)

- Two numbers have the same hundreds digit. One is greater. Explain which digit(s) you must compare next and why.
- Make two different numbers using digits 6, 8, 0. One number must be greater than 650 and the other less than 650. Explain how you know.
- A pupil writes 705 < 570 because 0 is less than 7. Explain the mistake and correct it.

Common misconceptions & teacher prompts

- Comparing tens before hundreds. Prompt: "Always start with the largest place value."

AfL & exit check (2–3 minutes)

Exit: Fill in: 608 __ 680 and state which digit decided.

Lesson 13: Order numbers to 1,000

Learning objective: Order numbers to 1,000 and construct sets that meet given constraints.

Success criteria:

- I can order numbers ascending/descending.
- I can explain my ordering strategy.
- I can create sets that include a constraint (e.g., 0 tens).

Resources:

- Base-10 blocks or place-value counters
- Mini whiteboards and pens
- Place value chart (H–T–O)
- Number lines (0–100 / 0–1,000), printed or projected
- 100-square (for Lesson 14)

Fluency starter (5–8 minutes)

- Order: 705, 570, 507, 750.
- Create 4 numbers to order (include one with 0 tens).
- Reason: Which should be second? Explain why.

Main input (CPA) and teaching points (10–15 minutes)

- Order by first grouping by hundreds, then tens, then ones; use a number line ladder.
- Model using a "sorting grid" (500s, 600s, 700s etc.) then refine.
- Introduce constraint creation: e.g., include a number with 0 tens (like 507, 602).

Guided practice (10 minutes)

- Order sets; discuss strategies; create numbers under a constraint collaboratively.

Independent practice (15–20 minutes)

- Task A: Order lists of 4–6 numbers.
- Task B: Create your own set meeting constraints.
- Task C: Reasoning: "If 507 is the smallest, what could the others be?"

Deep Dive (worded reasoning/problem-solving questions) (8–10 minutes)

- Create four numbers that order as: smallest has 0 tens; largest has 0 ones. Explain your set and why the order works.
- You have the numbers 507, 570, 705, 750. If you change one digit in 507 to make it the largest, which digit would you change and why?
- A set of four numbers includes one in the 600s, one in the 500s, and two in the 700s. All have a 0 somewhere. Create a possible set and order it.

Common misconceptions & teacher prompts

- Ordering by looking only at first digit. Prompt: "If hundreds same, what next?"

AfL & exit check (2–3 minutes)

Exit: Create two numbers in the 700s and order them.

Lesson 14: Count in 50s

Learning objective: Count in 50s, recognise patterns, and apply to real contexts.

Success criteria:

- I can count in 50s forwards and backwards.
- I can recognise patterns in endings and parity.
- I can apply counting in 50s to money/time contexts.

Resources:

- Base-10 blocks or place-value counters
- Mini whiteboards and pens
- Place value chart (H–T–O)
- Number lines (0–100 / 0–1,000), printed or projected
- 100-square (for Lesson 14)

Fluency starter (5–8 minutes)

- Count in 50s from 0 to 300.
- Next four multiples after 150.
- What pattern do you notice in the last two digits?

Main input (CPA) and teaching points (10–15 minutes)

- Use 100-square highlighting +50 jumps; show pattern 0,50,100,150…
- Teach that counting in 50s alternates between multiples of 100 and "50 more".
- Apply to contexts: 50p coins, 50m lengths, 50-minute intervals (as appropriate).

Guided practice (10 minutes)

- Count in 50s using 100-square; identify pattern; apply to quick money problems.

Independent practice (15–20 minutes)

- Task A: Complete sequences counting in 50s forwards/backwards.
- Task B: Missing numbers on a 50s number line.
- Task C: Apply to money (50p steps) or measures contexts.

Deep Dive (worded reasoning/problem-solving questions) (8–10 minutes)

- A cinema sells tickets in bundles of £50. A class raises £150 and then raises another £50 each week. How much after 6 weeks? Explain your pattern.

- When counting in 50s, why do the numbers end in 00 then 50 then 00 then 50? Explain using place value.
- You count backwards in 50s from 300. You stop at a number that is also a multiple of 3. What could it be? Explain.

Common misconceptions & teacher prompts

- Thinking count in 50s is same as count in 5s. Prompt: "How big is each jump?"

AfL & exit check (2–3 minutes)

Exit: Continue: 150, 200, 250, __, __.