

NUMBERS AND THE NUMBER SYSTEM

Pupils should be taught to:

Recognise and extend number sequences formed by counting on and back in steps of any size, extending beyond zero when counting back

As outcomes, Year 4 pupils should, for example:

Use, read and write:

next, consecutive, sequence, predict, continue, rule, relationship... sort, classify, property...

Count on and back. For example:

- From any number, count on in 2s, 3s, 4s, 5s to about 100, and then back.
- Count back in 4s from 40.
What happens when you get to zero? Can you go on?
What happens if you start at 39?
- Count in 25s to 500, then back.

Describe, extend and explain number sequences and patterns. For example, respond to questions like:

- What are the next three numbers in each sequence?
38, 47, 56, 65... 135, 137, 139, 141...
48, 41, 34, 27... 268, 266, 264...
Explain the rule.

- Fill in the missing numbers in this sequence.
Explain the rule.
□, □, 45, 49, □, 57, 61, □

- Take a 6×6 number grid.
Count on in 4s from 0.
Shade the numbers you land on.
What do you notice?

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

If you went on, would 44 be in your sequence? Or 52?
How do you know?

What happens if you start at 2?
Is the pattern the same?

Now try a 5×5 or a 10×10 number grid.

- What do you notice when you count from zero in:

twos	fours	eights
2	4	8
4	8	16
6	12	24
8	16	32

(4s are double 2s; 8s are double 4s.)

- Count on or back from any number in steps of any single-digit number. Predict what will come next each time.
What do you notice?

Now try steps of 11.

See also negative numbers (page 14) and adding or subtracting 10, 100 or 1000 (page 4).