

Growing and Shrinking Patterns

Additive patterns with numbers, shapes and objects

ELABORATION FOCUS

Recognising, describing and creating patterns that change by the same amount each time, and finding missing elements.

LEARNING INTENTION I can find the rule and the missing part.

Look

Find the gap

Say the rule

Keep going

Missing part

1

Look at the Pattern

Step 1: read the terms in order. Step 2: find the gap between each one.

2

Say the Rule

Step 3: is it growing or shrinking? Step 4: say it, like add 3 each time.

3

Use the Rule

Step 5: use the rule to fill a gap. Step 6: check it works both ways.

MODEL · A PATTERN THAT ADDS 3 EACH TIME

The pattern 4, 7, 10, __, 16 grows by the same amount each time.



Rule: add 3 each time · 4, 7, 10, 13, 16

The gap is always 3, so the missing term is $10 + 3 = 13$.

TEACHER MODELLING ROUTINE I do → We do → You do

WATCH FOR

Checking only the first gap, or guessing without testing the rule.

REMEMBER

The same amount is added or taken away every single time.

MATERIALS

Counters, blocks, pattern strips, number lines, hundred charts, beads.