

Location and transformation investigation

CURRICULUM ALIGNMENT

SHA.TRN.3

model and explain the effects of transformations on shapes and line segments.

SHA.SAL.3a

describe, interpret and record directional instructions and location.

INTERACTIVES

Transformation Playground · display, explore

Symmetry Tool · explore

WHAT THIS LESSON TEACHES

A reflection flips a shape across a mirror line so it faces the opposite way and stays the same distance from the line. A slide moves a shape to a new grid place without flipping or turning it.

→ A shape one square left of the mirror at B has its reflection one square right at C.

→ Sliding a shape one square right moves A2 to B2.

MODEL THIS ON THE BOARD

REFLECT A BRICK FOR THE WALL

- 1 The mirror line runs down column B on the building grid.
- 2 Your brick is at **A2**, one square left of the mirror.
- 3 Flip it across the mirror: the partner brick sits one square right at **C2**.
- 4 Both bricks stay the same distance from B and face opposite ways.

DISCUSSION STARTER

REFLECT

Do you name the letter or the number first on a grid square? Why does the order matter?

ANSWER KEY

Scaffold: visual check on the page

Q1: C2

Q2: C1

Q3: C3

Q4: C1

Q5: A2

a) Always : Reflection always keeps the same distance on the opposite side of the line.

b) Never : A slide moves the shape but never flips or turns it.

c) Always : Grid references always name the column letter first then the row number.

d) Never : Reflection keeps every length the same and only flips the facing.

EXTENSION SHEET · STRETCH ANSWERS

S1: F3 and E3

S2: E4

S3: 2 squares up

S4: E3

S5: which square to start on (its grid reference) and which way to slide it