

Tessellation: shapes that fit together

CURRICULUM ALIGNMENT

SHA.TRN.3

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

SHA.SHP.3a

investigate and analyse the properties of 3-D and 2-D shapes and identify classes of shapes based on these properties.

INTERACTIVES Pattern Blocks · challenge, display, explore

WHAT THIS LESSON TEACHES

Tessellation means fitting copies of the same shape together so they cover a surface with no gaps and no overlaps.

- Square floor tiles meet edge to edge and cover a whole floor.
- Hexagons in a honeycomb fit snugly with nothing left over.

MODEL THIS ON THE BOARD

TILING A STRIP WITH SQUARES

- 1 Start by placing one square tile on the board.
- 2 Add a second square so one full edge meets the first with **no** gap.
- 3 Keep adding copies until **6** squares sit side by side and fill the strip with no overlaps.

DISCUSSION STARTER

REFLECT

Which shapes tiled with no gaps for you, and which left spaces?

ANSWER KEY

Scaffold: visual check on the page

Q1: Yes

Q2: Yes

Q3: No

Spot: Tessellation means shapes fit with no gaps and no overlaps. Circles always leave curved gaps, so they do not tessellate. Squares and regular hexagons do.

EXTENSION SHEET · STRETCH ANSWERS

Investigation: Tile a garden path — open-ended; scan pupils' working for valid solution paths rather than a single answer.