

Tessellation — shapes that fit together

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

a) Always — Squares meet edge to edge and always tessellate.

b) Never — Round shapes always leave little gaps between them.

c) Always — Regular hexagons tessellate just like a honeycomb.

d) Never — Only certain shapes such as squares, triangles and hexagons tessellate.

EXTENSION SHEET · STRETCH ANSWERS

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