

Tessellation – shapes that fit together

MODULE 8 · SYMMETRY, LOCATION AND TRANSFORMATION REVIEW

HOW TO ANSWER TODAY

- **Transformations.** Slide without turning → translation. Flip (mirror) → reflection. Turn → rotation.
Triangle slid left → translation · Letter flipped → reflection

★ STRETCH PROBLEMS

- 1 Cara is planning a symmetrical flowerbed in the school garden. She draws one half, then flips the shape across the vertical line through its centre to make the other half match. Is this move a translation, a reflection or a rotation?
- 2 Cian is arranging leaf shapes for a den plan in the school orchard. He slides one leaf shape **5** units to the right, with no flip and no turn. Is this move a translation, a reflection or a rotation?
- 3 Aoife is making a tessellation pattern for the corridor display. She takes one tile and turns it **180 degrees** around its centre to make the next tile. Is this a translation, a reflection or a rotation?
- 4 Cian is designing a class crest for a new Gaelic football jersey on squared paper. He moves the crest so it slides **3** units up the page. Is this a translation, a reflection or a rotation?
- 5 Cian is painting a papier-mâché mask for the school play. He turns the mask **180 degrees** around its centre to reach the other side. Is this move a translation, a reflection or a rotation?

● INVESTIGATE

Which shapes tile the page?

On squared paper, try to cover a section with copies of one shape and **no gaps or overlaps**. Test squares, equilateral triangles, regular hexagons and regular pentagons. Which ones tessellate? Sketch each attempt and explain why some leave gaps.
