

In the area

Maths

Ages 11 to 16

This is a maths game based on area. Each pair of pupils uses an A5 sheet of centimetre-squared paper.

They take it in turns to draw any shape with an area of 24 cm^2 . The rules are that each shape must be a single polygon (ie, straight sides) with a maximum of six sides. None of the shapes should overlap.

The “six-sides-or-fewer” rule is designed to allow L-shapes, but to rule out staircase-like polygons that make the game too easy. The loser is the first person not to be able to go.

The competitive element encourages learners to check each other’s shapes carefully. The fact that space is limited can push learners into adventurous ideas.

It may be worth discussing how to find the area of awkward shapes drawn on square grids first.

Enclose the shape in the smallest possible rectangle and then subtract the rectangles and triangles at the edge.

Pupils might have opinions on whether it is better to go first or second in this game ■

Colin Foster teaches mathematics at King Henry VIII School in Coventry