

## Investigations - Shape and Space (Hard)

**60 Centimetre Cube** - Investigate cubes with a perimeter of 60 cm.

**Colouring Maps** - Four colour map problem.

**Cubes** - Painting faces of cubes and slicing.

**Equilateral Matchsticks** - Patterns made from equilateral triangles.

**Exterior and Interior Angles of Polygons** - Find relationships between angles.

**Farmer's Field** - Finding maximum and minimum areas given a fixed perimeter.

**Networks** - Investigating shapes without taking the pencil off the paper.

**Pentonimoes** - How many ways can 5 squares be arranged?

**Snooker Table** - Investigating a ball bouncing at 45 degrees.

**Tessellations** - Tessellating polygons.