# Symmetry, Reflection and Coordinates: Maths : Year 5 : Summer Term

**PlanBee**

| | Learning Objective | Overview | Assessment Questions | Resources |
|---|---|---|---|---|
| **Lesson 1** | To translate polygons on a coordinate grid. | Children will describe the shapes on a grid according to the coordinates of their vertices, then describe translations of shapes using algebraic terms, e.g. x +12, y-4. | • Can children name the features of coordinate grids?<br><br>• Do children understand what a translation is?<br><br>• Can children translate polygons in the first quadrant of a coordinate grid? | • Slides<br>• Worksheets 1A/1B/1C<br>• French elastic (optional)<br>• Translation Flash Cards<br>• Blank Coordinate Grid |
| **Lesson 2** | To reflect shapes on a grid. | Children will learn how to reflect shapes horizontally, vertically and diagonally on a grid. They will then practise doing this, reflecting shapes or simple patterns. | • Do children know what a transformation is?<br><br>• Do children know that reflection is a type of transformation?<br><br>• Can children reflect shapes across a mirror line? | • Slides<br>• Worksheets 2A/2B/2C<br>• Mirrors, tracing paper<br>• Diagonal Reflection 2A<br>• A range of physical maths resources (FSD? only) |
| **Lesson 3** | To find lines of reflective symmetry in shapes. | Children will find lines of symmetry inside shapes, then learn how to reflect shapes where a mirror line is either bisecting, touching or not touching the shape. | • Do children know what a mirror line is?<br><br>• Can children use mirrors or tracing paper to check or find lines of symmetry?<br><br>• Can children accurately draw lines of symmetry inside shapes? | • Slides<br>• Worksheets 3A/3B/3C/3D<br>• Lines of Symmetry sheet<br>• Mirrors<br>• Tracing paper |
| **Lesson 4** | To find and draw congruent shapes on a grid. | Children will look at several different types of transformation and identify which result in new shapes that are congruent with the original. They will then draw translations of shapes which are congruent with the original. | • Do children know the identical properties of congruent shapes?<br><br>• Do children understand why some shapes are incongruent?<br><br>• Can children draw congruent copies of an original shape on a grid? | • Slides<br>• Worksheets 4A/4B/4C<br>• Tracing paper<br>• Congruent Shapes 4A<br>• Congruent Shapes cards |
| **Lesson 5** | To explore ways in which some congruent shapes can tessellate. | Children will relate transformation of shapes to tessellation, and make tessellating patterns by rotating, translating or reflecting shapes. | • Do children know what tessellation is?<br><br>• Do children know that some shapes will tessellate and some will not?<br><br>• Can children create tessellating patterns by reflecting or rotating shapes? | • Slides<br>• Worksheets 5A/5B/5C/5D<br>• Art software<br>• Thick card/foam, poster paint (FSD? only) |

*NB: 'FSD? Activity only' refers to the alternative 'Fancy Something Different...?' activity within the lesson plan* **www.planbee.com**