EFFECTIVE MATHS

Year 1

Block 1

Geometry

UNIT OVERVIEW

The unit begins with learning about solid shapes (3-D shapes). The shapes encountered are cubes, cuboids, pyramids, cylinders, spheres an cones. Children think of real-life examples that use these shapes and identify similarities and differences between the shapes. For example:
Are the faces flat or curved? Can the shape roll?

Children then learn about flat shapes (2-D shapes). The shapes encountered are squares, triangles, rectangles and circles. Children's understanding of the term 'edge' is developed so that they know and edge is a straight side.

Learning to create 2-D shapes comes next. Children practise accurate cutting out of shapes. Then they learn how to draw them, initially on blank paper by plotting corner points, connecting through the points and then 'lining in' (drawing over the lines from corner to corner).

Lessons on repeating patterns further embed knowledge about 2-D and 3-D shapes. Children identify the unit of repeat and how the unit of repeat is constructed. For example:
Has there been a change in size? Colour? Shape? Is the pattern an A-B pattern? An A-A-B pattern?

Children then begin to learn to compose 2D and 3D shapes from smaller shapes to match an example. This includes copying a tangram picture, without overlaying the pieces on the example.

The last part of the unit focuses on position and direction. Children learn appropriate language to describe positions. They also use 'left', 'right', 'up' and 'down' to describe movements across grids. Work on movement involves creating patterns that go forwards, backwards, up and down. The unit concludes with learning about whole and half turns. Children's understanding of repeating patterns is developed further: the unit of repeat now includes a half turn.

LESSONS

[1] Identifying 3-D shapes

[2] Identifying 2-D shapes

[3] Creating 2-D shapes (cutting out and drawing)

[4] Shapes around us and patterns with 2-D shapes

[5] Patterns with 2-D and 3-D shapes

[6] Compose 2-D and 3-D shapes from smaller shapes

[7] Compose 2-D and 3-D shapes from smaller shapes (tangrams)

[8] Positions
(Eg: front, behind, top, bottom, above, below, near/close, far, around etc)

[9] Movements
(Eg: forward, backward, up, down, inside, outside)

[10] Turns
(Eg: whole turn, half turn)