2D Shapes and 3D Patterns Home Information Sheet
Second Level (a)

MTH 2-16a Having explored a range of 3D objects and 2D shapes, I can use mathematical language to describe their properties, and through investigation can discuss where and why particular shapes are used in the environment.

MTH 2-16b Through practical activities, I can show my understanding of the relationship between 3D objects and their nets.

MTH 2-16c I can draw 2D shapes and make representations of 3D objects using an appropriate range of methods and efficient use of resources.

Over the next few weeks we are going to be learning to:

- Know and understand the terms face, edge, side, corner, angles, vertices, diagonals, circumference, equilateral, right-angled
- Know that the faces of solid shapes meet to form edges, and edges meet at a vertex
- Investigate and discuss the properties of triangles, quadrilaterals and polygons using appropriate vocabulary
- Investigate and discuss the properties of 3D shapes using appropriate vocabulary
- Understand what a net is and recognise nets of common shapes
- Understand the relationship between a 3D shape and its net
- Investigate different nets for cubes and cuboids
- Use methods and drawing instruments (e.g. ruler, protractor, compasses) accurately to draw simple 2D shapes
- Create circle patterns using compasses
- Appreciate the differences between skeletal and solid models

Here are some ideas of how you can help me at home!

3D objects at home *paper* Ask children to look around the home for 3D objects such as cupboards, books, sweet tins, food packaging. They draw some different items, then sketch what they think the net of each might be.

Cube nets *cm squared paper* Ask children to draw two nets of cubes on squared paper: one which they think will work and one which they think won't work. Back in class, they swap nets with a partner and guess which is which, then check by cutting and folding.

Here are some websites that you may find useful to use with me!

Polygon Sort –
http://www.crickweb.co.uk/ks2numeracy-shape-and-weight.html#quad

Triangle Properties –
http://www.crickweb.co.uk/ks2numeracy-shape-and-weight.html#triangles

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