Wednesday 5th December 2007 9.10-10.15am

Mathematics

05.12.07	Ms Orr – class teacher	Year 4	More able set – 24 in set

Groupings:-
Red and Blue – most able pupils
Green and Yellow
Orange – group requiring most support

Learning objectives:-
Reinforcement and practice

- **Build upon previous learning of 3D shapes in year 3**
- **To name 3D shapes**
- **To describe and visualise 3D shapes**
- **To describe properties in terms of faces, edges and vertices**

Introduction to nets

- **Investigate nets of shapes, particularly CUBE**

KEY VOCABULARY:-
Polyhedron, polyhedra
Face, Edge, Vertex, Vertices, Properties
3 dimensions,Cube, cuboid, sphere, pyramid, square based pyramid, tetrahedron, prism, cone, cylinder, hemisphere

Resources
ActivStudio – squared paper background
Internet – buried shapes flash, nrich site, others to consider
http://illuminations.nctm.org/ActivityDetail.aspx?ID=125
http://nlvm.usu.edu/en/nav/topic_t_3.html
http://nlvm.usu.edu/en/nav/frames_asid_128_g_1_t_3.html?open=instructions&from=topic_t_3.html
http://nlvm.usu.edu/en/nav/frames_asid_129_g_1_t_3.html?open=activities&from=topic_t_3.html
http://www.learner.org/interactives/geometry/platonic.html

BBC Mathsworkshop shape.
3D Shape Millionaire Powerpoint
3D shapes
Feely Bag
Shape nets
Polydron
Plasticine
Art straws
Card squares and micropore tape
Squared and dotty paper
Laptop for small group work
Extension/challenge – shape investigations

WALT:-We are learning to

- **Name, sort and describe 3D shapes according to their properties**
- **Make nets for 3D shapes**

To be successful:-we need to

- **Know names of 3D polyhedra**
- **Know number of faces, edges and vertices for each 3D shape**
- **Know how the net for a cube is constructed**
- **Know how to identify nets for cubes**
- **Know how to construct nets for cubes, cuboids, triangular pyramids (tetrahedron) and square based pyramids**

COULD

- *I can name 3D shapes and describe their properties.*
- *I can recognise when a net will or will not make a cube.*
- *I can make different nets for tetrahedra and square based pyramids.*

SHOULD

- *I can name 3D shapes and describe their properties.*
- *I can describe 3D shapes using mathematical vocabulary vertices, faces and edges, in particular cube, cuboid, tetrahedron (triangular based pyramid) and square based pyramid.*

MUST

- *I can name 3D shapes and describe their properties.*
- *I can make a cube net.*
- *I can work out when a net will make and will not make a cube using practical resources.*