

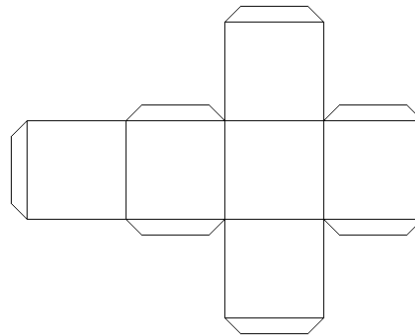
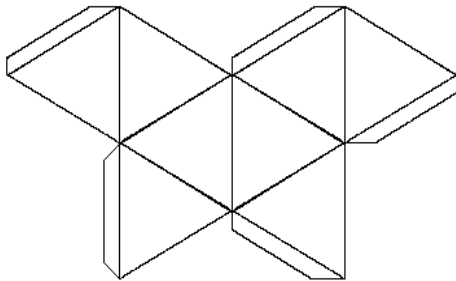
## Architectural Model Making

Resource sheet developed from Teacher's CPD, 12 June 2009

### Activities

#### **Making a basic model using pre-prepared paper copies of simple nets:**

1. Attach net to card - or whichever media you are using - using spray or photo-mount to allow for removal later
2. Using scalpel and cutting board, cut out the net leaving the tabs on  
Work around the shape and always cut away from the shape
3. Check where you need to fold the net and tabs  
Fold net and tabs - you can now remove paper from card net - and attach double sided tape to tabs  
Remove non-stick layer of tape and attach tabs to make the 3D form/s



#### **Where to find simple nets (you may have to add tabs!):**

[http://www.bbc.co.uk/schools/gcsebitesize/design/images/dt\\_boxnet.gif](http://www.bbc.co.uk/schools/gcsebitesize/design/images/dt_boxnet.gif)

<http://gwydir.demon.co.uk/jo/solid/octa.gif>

[http://content.ncetm.org.uk/images/microsites/Learning\\_Maths\\_Outside/LMO\\_4.1\\_Imag\\_e2.jpg](http://content.ncetm.org.uk/images/microsites/Learning_Maths_Outside/LMO_4.1_Imag_e2.jpg)

<http://www.senteacher.org/wk/3dshape.php>

## Developing the models:

- Problem solving – resolve design issues on paper before moving onto 3D  
Groups of pupils could work together or individually

- Looking at volumes in context  
Use the sketch model as demo – show scale of doors and windows, simple plan drawings of roads, pathways etc. place model/s in environment

- Apply texture (before or after making the nets up)  
Collect rubbings of variety of surfaces, found images and textures, painting, scoring or any other surfaces generated in art lessons

- Adding detail  
Re-cycling: encourage students to re-use materials ie. carton tops as windows, acetate skylights, sponge trees etc

- Evaluate what you have done so far  
Produce a design worksheet or your own instruction sheet as a way of recording and evaluating the process  
Consider how the models will be used

## Follow-up work:

What sort of model – buildings / boats / planes / other structures?  
Examples of how these could encourage learning outside the classroom

Experiment with the shapes you have generated  
How could they fit together? Explore possibilities and record the variety of outcomes through drawing and photography

Exploring types of building and construction  
Materials: discussion on properties of materials, sustainability and testing

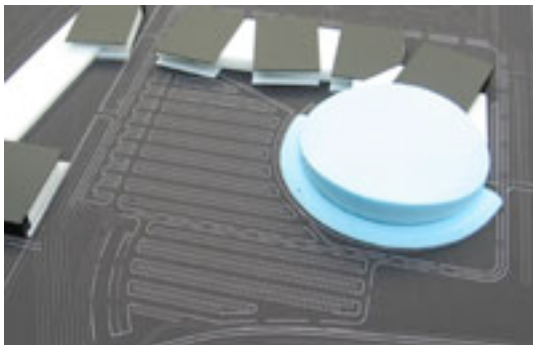
### Drawing processes:

Use of site visits and observational drawings and sketches  
Imaginative responses to images, models and visits  
Use of technical drawings – develop visuals from observational/imaginative work

How to translate 2D technical drawings into 3D models  
Encourage understanding of plans and use to inform 3D work  
Photocopy plans and cut & paste onto nets to demonstrate front/side elevations, ground/roof etc (use of dolls house!)

## Student Work

- Demonstrations: how to make basic flat shapes and turn them into 3D shapes  
ie. circles into cones, squares into cubes
- Site visits to other buildings – use of drawing / photography / creative writing  
Provide a selection of images of contemporary buildings to generate discussion (use NA's Questioning Architecture)
- Draw from the school building, in and around the school environment  
Use squared paper to make more technical drawings, including measurements
- Explore new sites and visualize ideas in 2D and 3D for new structures and buildings
- Use of architectural models and invitations to architects to present work
- Examine component shapes of buildings – how many cubes in the building?  
How can you change the building by altering the shapes?
- Using recycled materials – explore texture and shape  
To make 'scrap' models more professional looking, unify the model/s by painting / spraying all one colour
- The whole class could contribute to making a 'new' town/village/city  
Use floor or table space to plan the space  
Pupils could work in pairs to design and make models  
Pupils could have responsibility for various parts of the model or town
- Document the development of the place as more models are added  
Draw cartoons/storyboards of the emerging townscape – animate these
- Create an *architecture wall* - use the models to introduce new words/vocabulary



architect  
scale  
stone  
brick  
plans  
building  
concrete

model  
material  
glass  
design  
construction  
wood  
sustainable