

## Drawing basics

*Draw what you can see, not what you think you can see.*



### Observation

**Observation** is the key to drawing. For every person who says they cannot draw there is a person who has not looked. If we are attempting to draw a known object we tend not to look at it closely and draw from memory. All drawing is improved by placing the subject in front of us either in reality or on the page. It's very difficult to draw anything without visual reference. Observation in drawing means looking at the following:

- **proportion:** how individual areas of an object or structure compare to each other
- **placement:** the arrangement within your picture
- **perspective:** the natural structure of your picture according to the horizon
- **planes:** forms according to light
- **pattern:** the final shapes made by light, lines and colour.

### Freehand drawing

Freehand drawing, even in this digital age, is an essential tool in interpreting ideas and visual thinking. It can be used to put down ideas quickly and clearly without any special equipment and in any location. Freehand drawing provides the ability to conceptualise and modify design ideas from the first idea through to the final presentation.

## Drawing tips

- Always make light pencil drawings to check proportions before firming in.
- Always use a sharp pencil, whether it is a 0.5 mm pencil or a sharpened HB lead.
- Try not to overuse an eraser. Make every mark count.
- To draw straight lines, mark the beginning and end of a line with a point so you know where you are headed before you draw. Always look to where you are drawing, not at the pencil point.
- For right handed people, horizontal lines are best drawn from left to right and vertical lines from top to bottom.
- If possible have what you want to draw in front of you, whether it is the actual object or an image of it.

## Beginning to draw exercises

- Using a sharp HB pencil, and moving your arm as well as your hand, draw numerous parallel lines on a sheet of paper. A good exercise to do while sitting at a desk on the phone or waiting for your teacher.
- Take a small, simple, familiar object like a clothes peg or a bull dog clip and attempt to draw it by looking at it. Pay careful attention to proportion, light, materials and detail.
- Using a timer practice doing very quick sketches of objects. This forces you to see the main elements of the objects.

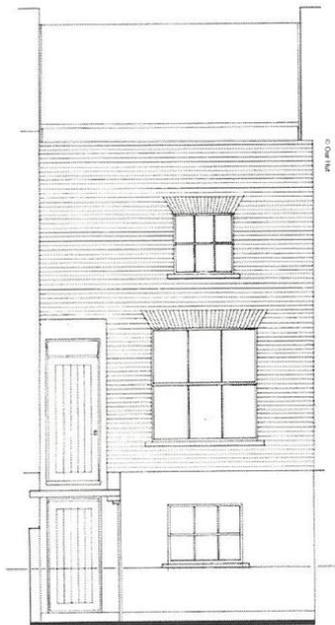
## Designing

Designing a building or space requires many different stages and drawings play a crucial part in the whole process. Drawings act as the main form of communication between client, architect and builder. It is a way of visualising and conceptualising a building or space before it is built. Teaching pupils to read architectural drawings will equip them to understand and participate with their environment.

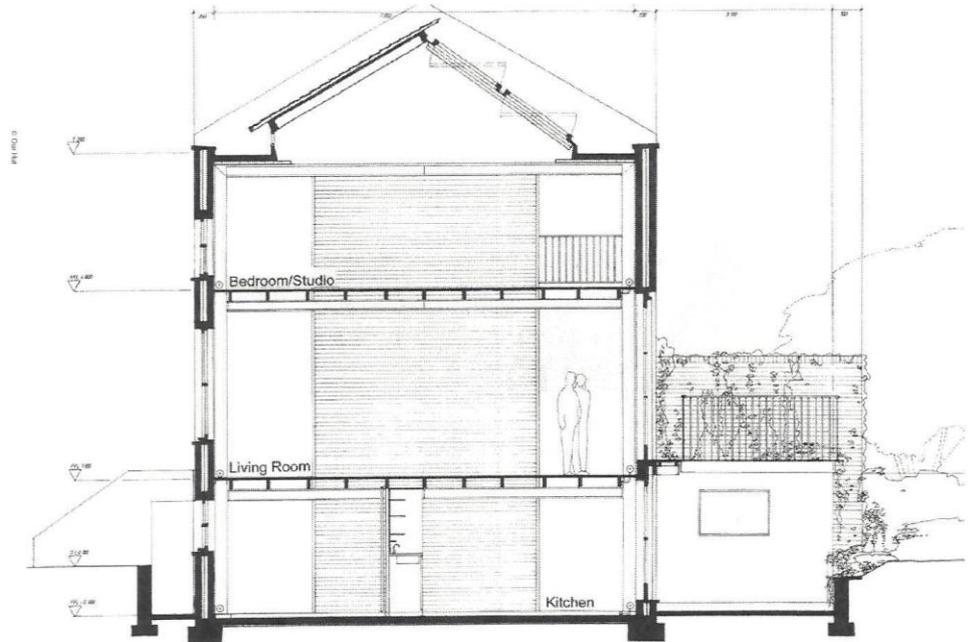
## Architectural drawings

Architects produce different drawings to represent all aspects of the design.

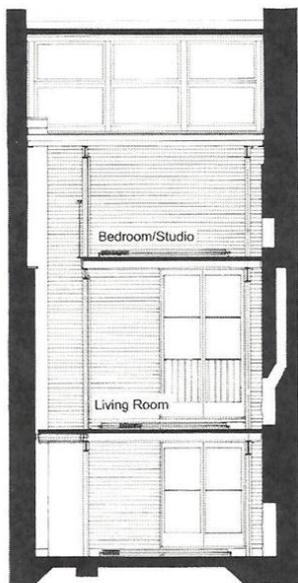
Shown here are a plan, section and elevation for the same building.



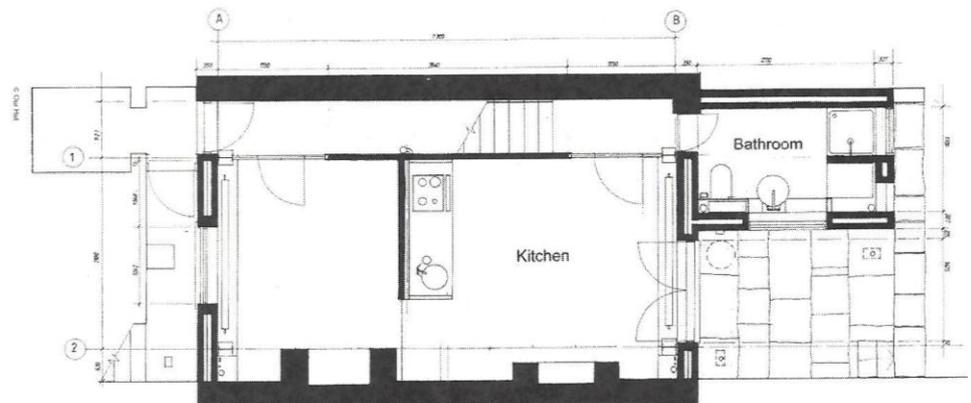
Elevation



Section



Section



Plan

- **Plans** show the dimensions of a space and where the walls, windows, stairs and doors are positioned.
- **Elevations** show a flat view of one side of a building including the surface of the building such as doors and windows.
- **A section** shows the internal structure of a building as if it were sliced through from top to bottom.
- Architects use different **scales** for their drawings as it would not be practical to draw them at full size. The information about a building can be reduced to a size that fits on to a piece of paper. Plans and elevations are usually drawn at a scale of 1:100, whereas details such as the design of a staircase might be drawn at 1:5.
- Computer aided design (CAD) packages help to generate detailed drawings and also two dimensional visualisations of how the building will look in the context of its environment, when it is completed.

## Drawing materials and equipment

### Pencils

- HB pencil for line drawing, B and 2B pencil for rendering.
- 0.5 mm Pacers or sharpened clutch pencils.
- Range of good quality coloured pencils.



*HB pencil*



*Pacer 0.5*



*Clutch pencils*

## Pens

- Fine 0.4 mm *Artline* black markers or *Artline Faxblac*. Good for drawing base or ground lines.



*Artline black marker*



*Faxblac marker*

## Erasers

- Soft, good quality erasers.
- When worn the edges can be cut to sharp and used to create reflective highlights in a rendered drawing.



*Staedtler Mars plastic eraser*

## Sharpeners

- Handheld reservoir manual sharpeners for individual use.
- Electric sharpeners or battery operated are great for a large class room.



*handheld reservoir pencil sharpeners*



*electric sharpener*

## Abrasive paper

- Used to get a fine point to a lead.

## Scale rules

- Either flat or tri-sided with scales 1:5/50, 1:10/100, 1:20/200, 1:25/1:250.



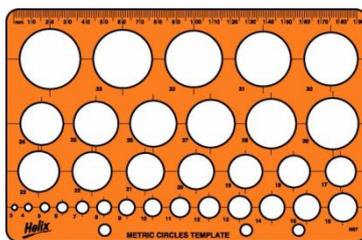
*Flat scale rule*



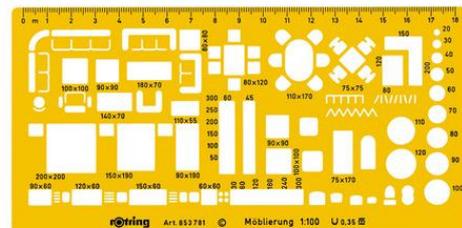
*Tri-sided scale rule*

## Templates

- Circle.
- Furniture scale 1:50 and 1:100. Good for doing multiples of tables and chairs, planning layouts for restaurants.



*Circle template*



*Furniture template scale 1:100*

## Compass

- Drawing circles and arches.



*Standard compass*

## Set square

- 45 and 30/60



*45 degrees set square  
adjustable set square*



*30/60 degrees set square*

## T-square

- Preferably acrylic and timber T-squares. T-squares with timber edges tend to chip.



*Timber t-square with acrylic edging*

## Masking tape

- 20 mm wide in a roll.



*masking tape*

## Drawing board

- Not necessary as you can easily use a table top and a T-square.
- Good if you want to leave a drawing on a board and come back to it. Boards larger than A3 in size.
- Parallel rule boards come with stands to slope the board and are easily packed away.



*Parallel rule board with stand*

## Papers

- **Bond:** A4 or A3 photocopy paper
- **Cartridge**
- **Tracing paper:** good for many things, easily photocopied
- **Detail**

## References for this resource

Rochford, J. (2010) *Freehand Drawing in Stage 6 Industrial Technology A Student's Workbook*, KJS Publications Pty Ltd, Sydney.

Web site: [www.kjspublications.com.au](http://www.kjspublications.com.au)

CAF Chicago Architecture Foundation (2007) *Architectural drawing, The Architecture Handbook: A Student Guide to Understanding Buildings*, Teacher and Student editions. Chicago Architecture Foundation, Chicago.

Web site: <http://caf.architecture.org/Page.aspx?pid=621>