

Vectorworks for Garden Designers

Part I

Introduction to Vectorworks

Oxford College of Garden Design

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1 Introduction to the Vectorworks Interface

Start up Vectorworks by double-clicking on the icon.

The application may seem very slow to start – don't panic, this is usual!

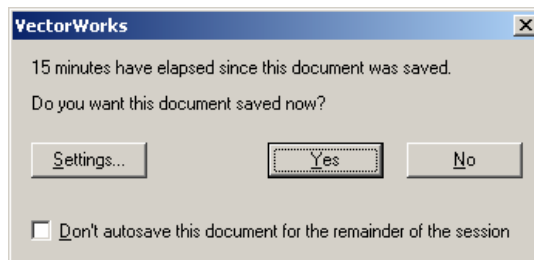
1.1 A few initial discussion points

Usually Vectorworks uses a dongle to prevent piracy, although it is possible to buy a multi-user package.

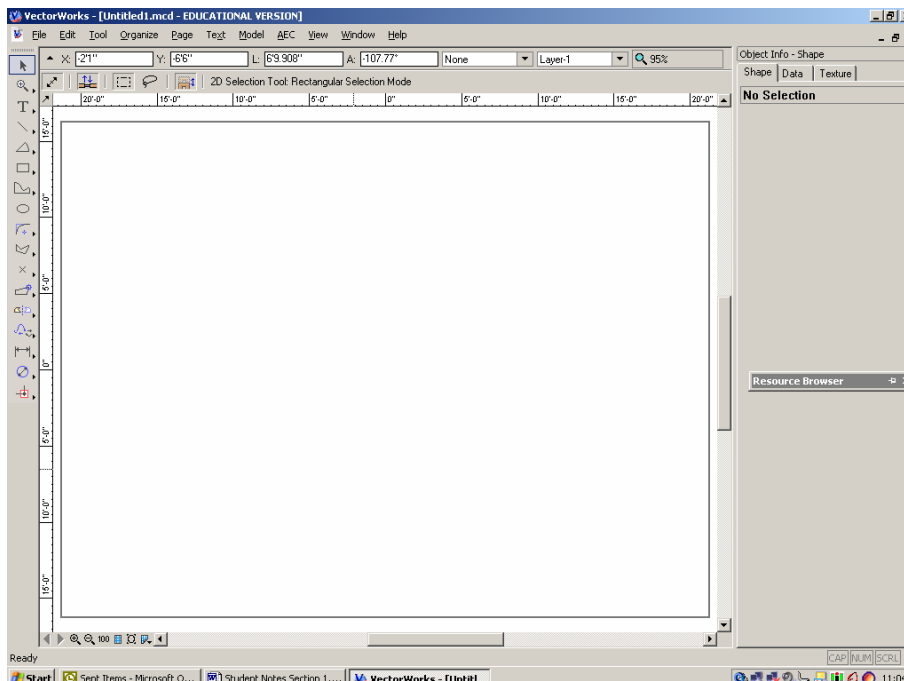
When Vectorworks installs it does not create an icon – one has been set up for the training session, but you won't see it on your home computer, unless you make one yourself!

Apparently Vectorworks, like some Microsoft applications, suffers from a memory leak problem. If the application starts slowing down, save work, close the application and re-start.

Vectorworks prompts for an automatic save every 15 minutes with a pop-up screen (as below). It's important to save work in progress, but if you're just playing say "no" to the save.



1.2 What am I looking at?



When you start the application, this is what you see.

In common with other Windows applications, there is a Window title bar and a Menu bar.

Note that the “Help” menu brings up a PDF document which can be read in Adobe (if installed!), not a searchable system as with Microsoft applications.

The screen seen on start up is known as the “Workspace”. Workspace set-ups are predefined by Vectorworks and can be accessed from the “File” menu. We will use this one for the course, known as the “Architect” workspace.

Look under “File”, “Workspaces” to see the range available – try selecting a few to see how the workspace changes, then set back to the “Architect” workspace.

Down the LHS are a range of strange shapes – these are the drawing tools belonging to various palettes which will be gone into in detail during the course.

Moving your cursor over the tools brings up their names and right-clicking on them brings up other similar tools to select from. Have a look to become familiar with their names.

The main white space of the window represents a piece of paper on a drawing board. Note that it is possible to draw beyond the boundaries of the paper!

You can change how the page is displayed through the “Page” menu. Click on “Page”, “Fit to Window” and “Page”, “Normal Scale” to see this. (Normal Scale will depend on the scales chosen which will be covered soon)

It is possible to build up drawings in “Layers” in the same way that you might stick layers of tracing paper on top of each other on your drawing board. We will look at this in more detail at the end of this course – for the time being we will work with one layer.

The position of the cursor on the paper is defined by XY (Cartesian) and LA (polar - length, angle) co-ordinates displayed in boxes underneath the drop-down menus. The zero of the co-ordinates is defined as the centre of the paper.

Move the cursor around to see how these numbers change.

At the top right is a section headed Object Info – which will give details about selected objects (lines, circles etc.) once they are drawn.

At the bottom right is a section labelled Resource Browser which will be used to show which files and other resources are being used for a particular project. We will talk about this in more detail later – in the meantime don’t worry if odd stuff appears in here!

These last two sections are also palettes. All the palettes can be accessed and turned on and off through the menus.

Click on “Windows” then “Palettes” to see which palettes are turned on at present – you should see the 2D tools (the shapes down the LHS), the resource browser and the object information.

1.3 File naming conventions

By default Vectorworks wants to save files in C:\Program files\Vectorworks 10.5

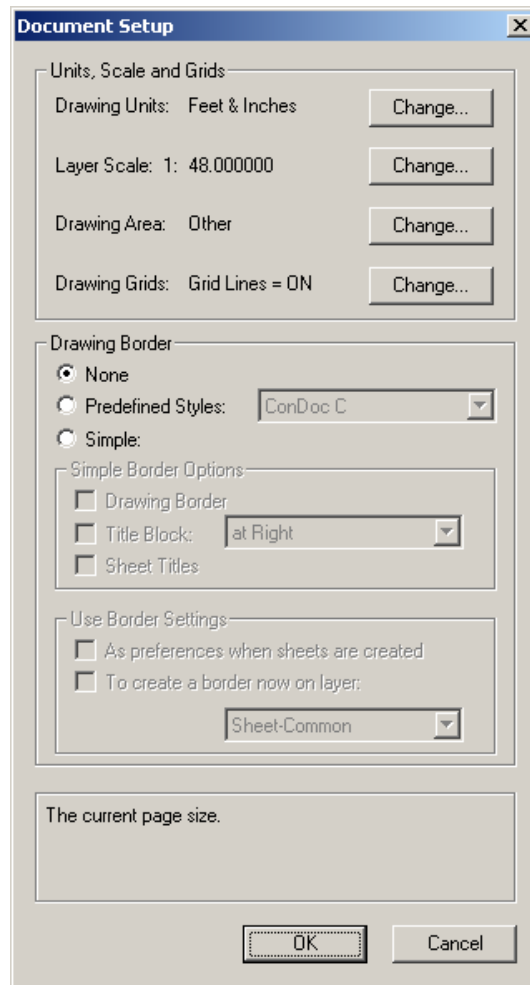
For this course we have created a directory C:\My Documents\Vectorworks Files to prevent students writing over anything in the program structure!

Vectorworks drawings are saved with the file extension *.mcd

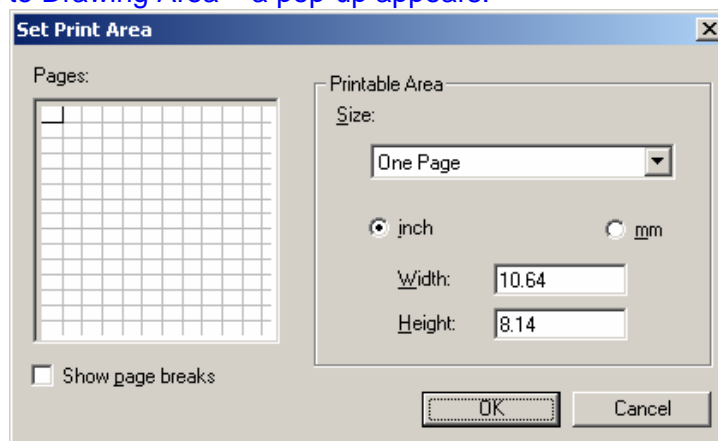
Save this file now as First Example.mcd in the C:\My Documents\Vectorworks Files directory.

1.4 Paper sizes and drawing to scale

Let's start by defining the size of paper we want to draw on. Click "File", "Setup", "Document Setup"



Click on change next to Drawing Area – a pop-up appears.



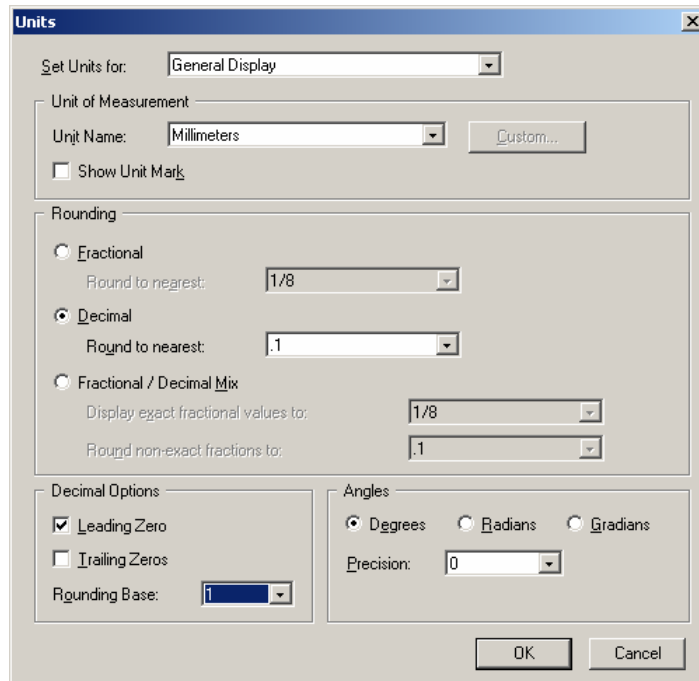
By default this version of Vectorworks is set to American page sizes and units, so we need to set it to metric.

Select ISO A4 from the "Size" drop list. Select mm instead of inch. Select show page breaks, then click OK.

Note that Vectorworks default setup for the page is landscape – if you want portrait you will have to select "other" from the size droplist and manually enter 210 and 297mm for the page dimensions.

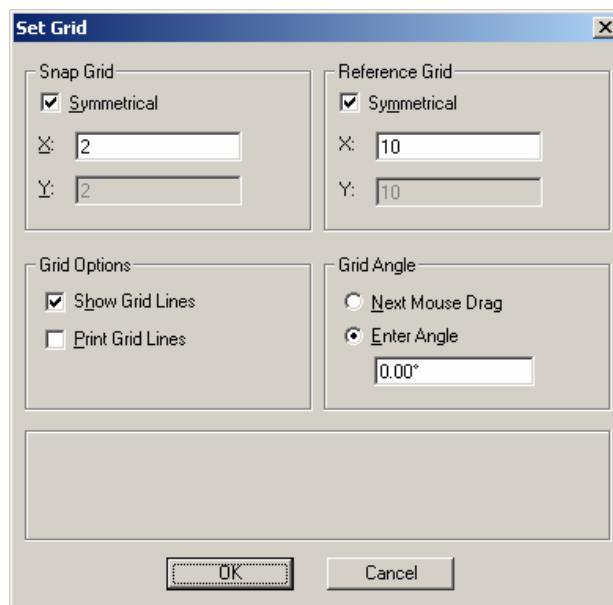
(If the page breaks appear across the middle of the paper it is because your printer is set to portrait. This can be corrected through “File”, “Print Set-up”)

The units shown on the page can be set to millimetres by clicking on “Change” next to drawing units and selecting millimeters from the Unit Name drop list on the pop-up screen as shown below.



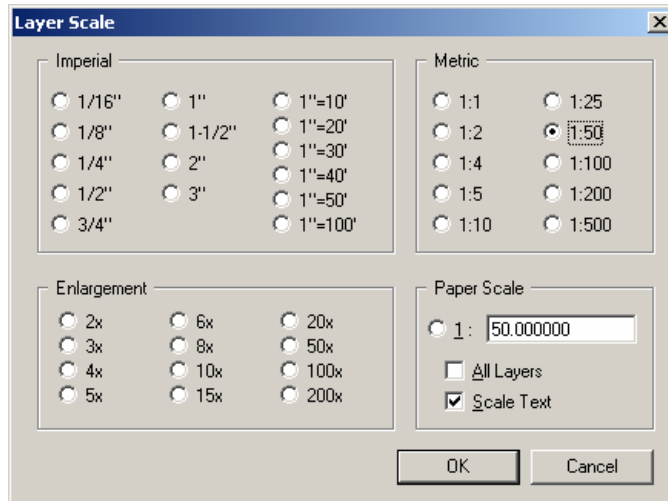
Check that all other boxes are set as above

Using a grid can help in the placement of drawn objects. The grid is only seen if you zoom in close. Set the snap grid to 1 and the reference grid to 10 (remember units are millimetres).



Finally we can define the scale of our drawing.

Select “Layer scale”, “Change” – the following pop-up appears.



We want to work in metric at a scale of 1:50, so select the correct button and click OK.

As we're only working with one layer we won't select anything else at the moment.

Now note that the XY position of the cursor in the workspace is shown at the 1:50 scale, i.e. the scale of the object we are going to draw, not the paper sizing.

1.5 Saving Templates

This is a useful set-up, so to prevent having to do all this every time we start a picture it can be saved as a template.

Click "File", "Save as template" – note a template has the file name extension *.sta. Save with a recognisable name like A4 landscape 1 to 50.sta

Note that although saved as a template – the picture being worked on will still be saved as an *.mcd file – look at the window header to check this.

2 Simple Drawing Techniques

2.1 Handy Hints

Remember if you accidentally move your page around when drawing you can click on “Page”, “Fit to Window” to re-centre it. If you accidentally draw something you don’t want use “Edit”, “Undo” to get rid of it (or CTRL Z).

2.2 Drawing a simple shape



Start by selecting your template file (use the recent files list on the “File” menu) and saving the document as Example 2.mcd

Make sure all the page is displayed through “Page”, “Fit to Window”.

At the moment we will be working with no constraints on. This will be explained in more detail in a moment – but for the time being we need to turn all the constraints off.

Open the “Constraints” palette (click on “Window”, “Palettes” and the palette appears). Make sure all the symbols are de-selected, by clicking on those with a square around them, then close the palette down.

The tools down the LHS are now mainly for drawing different shapes, as well as selecting items, placing text and zooming in and out on your drawing. You need to keep an eye on which tool is selected (has the box round it) – otherwise you may accidentally zoom when you want to draw a circle or draw when you want to select!

If you right click on a tool, a selection of similar tools are shown – e.g. double lines, regular polygons etc. Some useful tools are obtained by right clicking on the zoom tool  for example, the move page  tool which allows you to move the sheet of paper behind your drawn object rather than move the object.

Select the 6th picture down – the rectangle tool The , cursor should change to a cross. Click and drag to draw a rectangle.


Now look at the object information palette on the RHS of the screen – it gives data about the shape.

The shape can be rescaled by typing the lengths of the sides into the $\pm X$ and $\pm Y$ boxes.

The pattern of nine circles indicates where the fixed point will be when rescaling the shape: at a corner; in the middle of a side or in the centre of the shape. The co-ordinates of the point selected are also shown.

Try rescaling the shape from different points to see how this works.

2.3 Changing views

You can zoom in and out on what you have drawn by using the zoom tool  or using one of the small buttons seen in the very bottom left of the screen. Vectorworks also has the useful feature of being able to flip back and forward through previously selected views (bottom left arrows).

Try zooming and paging through the views to see how this works.