Chromatic and Achromatic Colour - Definitions

Before we continue with our studies it is essential to our progress that we fully understand what is meant by chromatic and achromatic colour.

Although the word 'colour' is used in the term 'achromatic colour', achromatic colour consists of black, white or greys, the last being mixtures of only black and white. Therefore black and white and all mixtures of these neutral greys constitute what is known as achromatic colour.

All other sources of colour such as red, blue, green, yellow, etc. are what are known as chromatic colours. It is important that this difference between achromatic and chromatic is clearly understood before proceeding further.

Colour Notation

Colour notation is basically a system of identifying colours accurately. As we have seen, the name of a colour such as Orpheus means nothing, and there is obviously no indication in the name to suggest a colour by which it can be even remotely identified. It might even be achromatic. The name Orpheus was actually selected from a leading paint manufacturer's paint colour card and it is quite possible that a different manufacturer could be calling

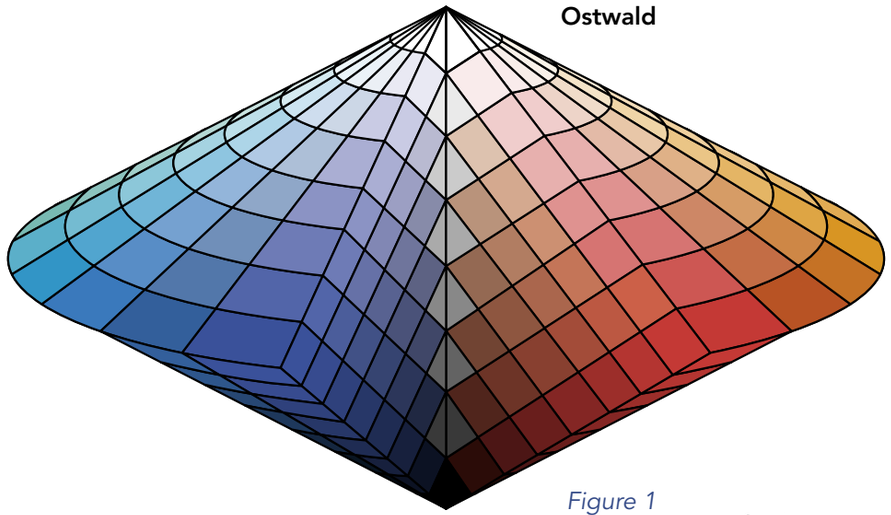

Figure 1

an entirely different colour by the same name, or the identical colour by a completely different name. So names of colours by themselves are most unreliable as far as the identification of a precise colour is concerned.

If ten students were each given a box of paints and an outline drawing of a rose and then asked to colour it in 'rose pink', although most of us would have an idea of what rose pink is, the result would be ten different interpretations and therefore ten different colours. It is because of this discrepancy between names and colours that it is very important indeed to have a reliable system of colour notation whereby we are able to describe a colour accurately so that the exact colour will be instantly recognizable by a third party. The ability to do this is extremely important to designers and colourists.

There are various systems of colour notation in use today, but the one most favoured by designers and architects throughout the world is that of the American colourist Albert H. Munsell. Munsell was born in Boston, Massachusetts in 1858 and was primarily an artist, although later on he became a lecturer. He became very interested in the detailed study of colour and in the late 1890s devised his system of colour notation to assist with and to supplement his lectures on colour. From then onwards he

to obtain one of these colour cards if possible, as they are invaluable for the pre-selection of paints. Two types are published, one printed, the other a genuine sample of the actual paint on a sample of watercolour paper mounted on the colour card. It is usually the printed cards that are readily available in art shops.

The Structure of Paint

There are three main constituents of paint: pigment; binder or medium; and driers - four if you count thinners. Earlier we mentioned that the Egyptians added certain ingredients to their pigments to make them stick together, and make the paint more permanent. In today's modern manufacturing processes the binder is essential. The binder is that part of the paint, whether it is oil, watercolour or acrylic, that binds the particles of pigment together when the paint has dried, and which also serves to carry the pigment in suspension while the paint is being applied. Driers are substances which are added to the paint to help the paint dry. Thinners are substances that are added to the paint to make it workable so that it can be spread easily. It is not intended to go into any further detail than this on the structure of paint, but it should be noted that most paints dry by oxidation to the air, leaving the pigment particles, and thus the colour, evenly spread on and bound to the surface.

Colour Mixing

When mixing colours it is essential that palettes, brushes and water are kept scrupulously clean and the water changed often.

As watercolour brushes are so expensive we would suggest that you keep one special brush, possibly a number six, exclusively for the mixing of the colour.

An older, somewhat worn brush would be ideal for this purpose. Whatever you do, do not try to apply your colour with it. Keep it exclusively for mixing.

Wherever possible select a colour direct from the tube for your requirement. Where this is not possible and a colour match cannot be made, select a colour nearest to the one you require and then add to it a second colour to modify it. You may have to add small quantities of other hues as well. If, for instance, you want to mix a very light orange from yellow and red, the quantity of each colour will be dictated by the tone of the colour required, as will the order of mixing. In this particular case it will be necessary to use a larger quantity of yellow than red. As the orange is to be light in tone it will be found that you will need more yellow to stain the red than vice versa, and the desired tone will be achieved much more quickly and without wasting much paint. Put out the bulk of your colour, in this case yellow, and then add to it very small amounts of red, which has a stronger staining power than yellow, until the required tone of orange is achieved.

a *Mix up your colour as near to the colour of the sample as you can. Paint this across the end of a strip of paper and let it dry.*

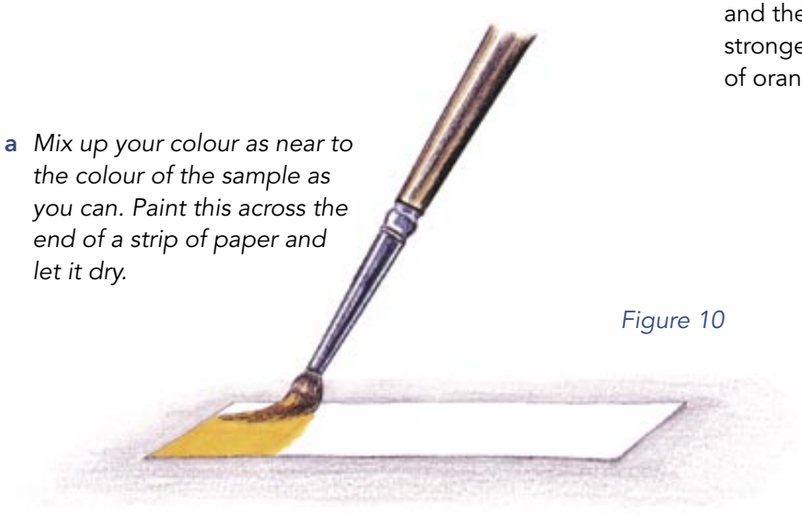

Figure 10

b *When dry place your test strip against the sample. In this case it is clear that the test strip colour needs some more red added to it. Mix in a little more red and repeat the process until the test strip and sample match.*

This will dissolve the pencil colour, turning it into a normal watercolour pigment, and a colour wash can be obtained. The proportion of colour dissolved will naturally depend upon the amount of water used and the pressure applied. It is also possible to dip the pencil into water and then to apply the colour. *Figures 22a to 22f* show examples of colour blending.

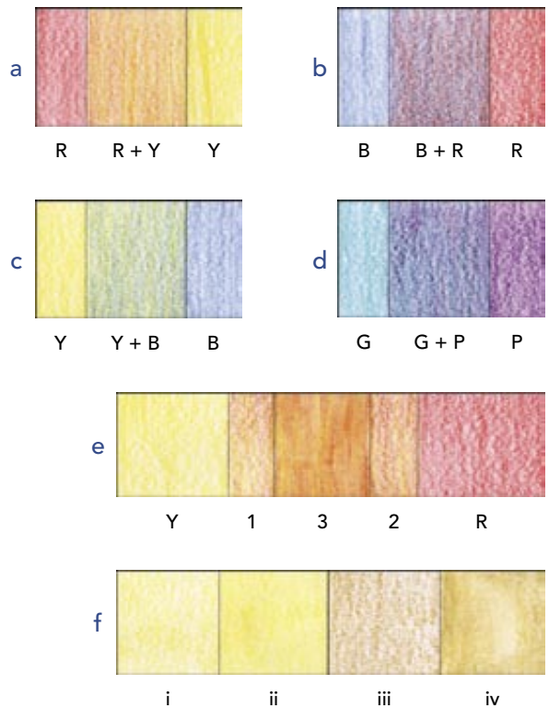

Figure 22

Coloured Paper Grounds

Coloured paper grounds such as Canson papers, which are normally used for pastels, can also be used in conjunction with coloured pencil. These have the advantage of providing a background without having to resort to watercolours. Dark papers can be selected to enhance some of the lighter tints of pencils which would otherwise not be suitable for use on, say, white cartridge paper. Here again it is up to you to experiment with both pencils and papers. *Figures 23a to 23c* show some examples of selected colours used on coloured Canson papers.

Figure 22 a-d *Shows the simple blendings of two colours.*
Figure 22 e *Shows the blending of two primary colours R and B using Conté water colour pencils. At 1 and 2 the colours have been blended dry. At 3 the colours have been blended by overbrushing with clean water. A similar effect can be achieved with ordinary pencil crayons and a clear solvent felt tip pen.*
Figure 22 f *Shows two examples of how colour can be 'blended' simply by rubbing the original colour with a paper stump as used for blending pastels.*

Figure 23 *Examples of pencil crayons used on*
a A light, neutral coloured paper
b A dark, low density paper
c A light, high chroma paper


a


b

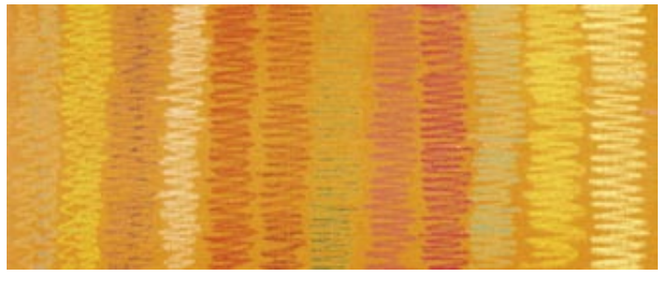
c

Figure 23

Rendering Plans and Elevations with Art Marker Pen

We often think of renderings only being in perspective *(see Figure 20)*, but rendering plans and elevations can be an excellent organizational tool for sample boards, and can be done quickly and effectively in a variety of techniques.

You might think that since plans and elevations are two-dimensional drawings, matters like shadow and texture may not be as important. This is not at all true. You are rendering these, so all the matters that you must address in the perspective will also need to be addressed in these two-dimensional drawings. The difference is that when you *draft* these drawings you always include dimensions complete with dimension lines. When you *render* them you create a drawing that is less technical, since it will be used as a tool to explain, to give the client an idea and to organize a presentation.

Figure 20
Perspective Marker Illustration of an office reception area