SUBTRACTIVE COLOUR MIXING

Colour has three properties

Hue - the property by which we give the colour its name. This is where it belongs in the spectrum. It is a good habit to refer to colours by these spectral names ROYGBV and all their intermediates (eg red - orange, blue -green) rather than pigment names etc.

Tone -its lightness or darkness, sometimes called value. how a colour appears in a black and white photograph. Technically a **tint** = colour + white while a **shade** = colour + black. This is not always the case with pigments as explained below.

Intensity- its degree of pigment saturation or how far it is removed from grey, sometimes called chroma.

Practical use of these for mixing paint

We change **hue** by mixing two different paints together (blue and yellow creating green)- or by getting another pigment (buying a tube of viridian green).

We change **tone** by adding white to lighten a colour *but* find that black does more than darken a colour . It changes its hue. An obvious example is the way black and yellow produce dark green rather than dark yellow.

This is because the pigment that makes up the black paint behaves like a blue or violet. A way of adjusting tone without this happening is related to how intensity can be modified:

A colour can be made less **intense** by mixing it with its complementary. Eg a yellow mixed with a violet will result in a duller yellow. Because the cool hues are usually darker pigments and the warm are lighter there is usually a change in tone when opposites are mixed.

More importantly this idea of 'cancelling' the influence of a colour by mixing in some of its opposite or complementary allows subtle adjustment of all mixtures on the palette.
A greenish yellow can be returned to a yellow by adding a little red.
A blue that seems too intense can be dulled with orange.
Experiment with mixing complementaries. As your colour vision gets more discriminating try to identify the tertiary colours and mix them with their opposites. Eg a red- orange can be dulled with a green-blue.

The colour wheel overleaf is a suggested pattern for looking at these three properties and the mixture of complementaries or opposites.

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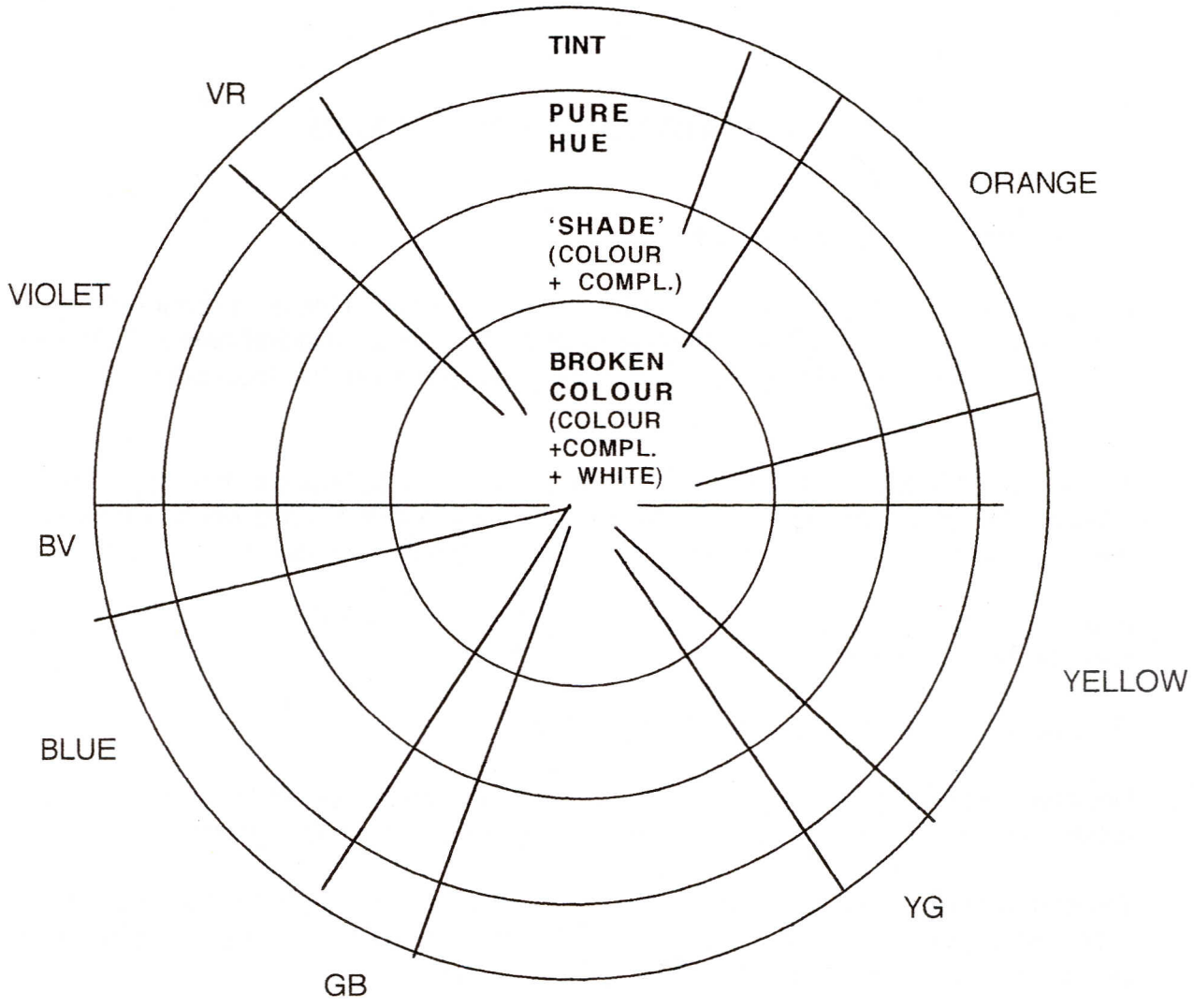

The wheel is made from any group of pigments that you choose - ie your palette.

From these pigments you place colours that get closest to the spectral hues. Some may be straight from the tube and some mixtures. A wheel made from a limited palette of three or four colours will look very different to a wheel made from the full range of pigments available.

The spectrum you have mixed is the **pure hue** area of the wheel.

A **tint** is the pure hue + white.

A **shade** is technically pure colour + black but for the reasons already stated the shade here is the colour + its opposite or complementary. This is also a de- intensified colour. To produce this duller hue you need to adjust the proportion of pigments in the mixture carefully. Red will dull with a little green and vice- versa.

A **broken colour** is this duller mixture + white. You might also think of this as the pure colour + grey. Compare it to the tint to see the difference.

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