

## *Colour Theory*

**Colour** is the element that best expresses the emotional aspect of a subject and the mood of the artist. Sir Isaac Newton discovered the prism or scale of colours in the 17<sup>th</sup> century. In the early 18<sup>th</sup> century the colour wheel came into being. It shows in a simple way the relationship between colours.

Watercolours consist of finely ground pigments mixed with gum arabic and glycerin and oxgall. As additives Gum arabic increases brilliance, gloss and transparency while Oxgall improves wetting and flow on paper

**Hue** – is the name of the colour in its simplest form and best describe their position on the colour wheel.

**Pigment** – is the physical substance of the paint and describes the formula. Paints are often named for the mineral or chemical used to make them. Alizarin Crimson is not a hue but a specific formulation of a hue. Look on the tubes to find the composition codes for each pigment.

**Intensity**, purity or Chroma is the **saturation** of a hue. Colours at their purest are found on the colour wheel. You can lessen a colours purity (add water), or dull it (add it's complementary) to made an **unsaturated** colour.

Unsaturated colours such as browns, indigo, sepia, are not found on the colour wheel.

Saturated colours are powerful and should be reserved for the center of interest. The eyes tire of these quickly and too many vivid hues can cause confusion inn a work. Dulled hues are less attractive but tend to reduce tension.

Too many dull colours are uninteresting unless countered by samples of pure colour.

- **Primary** colours – The 3 basic colours, red, blue and yellow from which all other colours are created.
- **Secondary** colours – violet, orange and green created by combining two adjacent primaries.
- **Tertiary** colours – created by combining a primary with an adjacent secondary, such as blue green.

**Value** or tone – the relative lightness or darkness of a colour

**Key** – The value dominant in a painting, ranging from light to dark.

**Warm** colours – red violet to yellow green. Warm hues attract our attention, excite our emotions, and give a feeling of action.

**Cool** colours – blue violet to green. Cool hues are refreshing, relaxing and clean. Violets can be moody, but too much can be depressive or gloomy.

Almost any colour can be relatively warm or cool compared to another colour. Red violet will be warm next to blue violet but cool next to red orange. It is possible to have warm blues and cool reds.

Colours have warm and cool versions, red can be warm by adding orange or cool by adding violet or blue.

### *Colour schemes*

- **Monochromatic** – Variations of one colour. Creates contrast through value differences.
- **Analogous** colours – 3 or 4 neighbors on the colour wheel produce harmonious schemes. Mixtures result in warm and cool versions with bright clean colours. Contrast is achieved through value differences.
- **Complementary** colour – opposite on the colour wheel. A limited palette of 2 complementary colours will give a contrast in hue as well as temperature. Further contrast is achieved with values. The darkest values will be made by mixing opposites.
- Other variations of colour schemes include the following:- **Complementary analogous, Triads, Secondary triads, Tertiary triads**

**Limited palette** – this is using 2-5 colours only.

- The advantage of this is that you learn more about the nature of the pigments through mixing.
- You save money by only purchasing a basic colour set.
- You achieve unified results with colour harmony.
- Remember to choose 1 colour to dominate (mother colour).

## Examples of 2 colour palettes using complementary colours

- French ultramarine / burnt sienna
- Alizarin crimson / hooker's green
- Winsor violet / new gamboge
- Phthalo turquoise / cadmium scarlet

## Examples of 3 colour palettes using a triad colour scheme

- *Traditional palette, high key* – cad red, lemon yellow or gamboge, ultra marine blue
- *Opaque palette, low key* – Indian red, cerulean blue, yellow ochre
- *Blackened palette* – indigo, Indian yellow, permanent rose
- *Delicate or high key palette, transparent* – permanent rose, aureolin, cobalt blue
- *Weathered or unsaturated palette* – indigo, raw sienna, burnt sienna

**Transparent colours** – light passes through a colour and bounces off the white paper. Traditional watercolour is painted with mostly transparent or semitransparent colours. Transparent colours make clean washes and clear glazes that lift off easily.

**Opaque colours** – do not allow light to pass through. Thinning makes them more transparent. Do not glaze with an opaque colour. Opaque colours include the cadmium range, and many unsaturated colours. They are often painted on last as they cover well. They make muddy mixes and don't lift off easily.

**Staining colours** – don't entirely lift off the paper, for example the phthalo range, prussian blue and alizarin crimson.

**Granulation** – pigments separate when washed onto paper. Some blues granulate beautifully. A textural effect achieved by using pigments that are chemically heavy or less refined.

**Counter change** - You can emphasise a colour by placing it next to a colour with opposite characteristics, such as opposite hue, value, temperature and purity. A center of focus can be created by placing the darkest area next to the lightest area.

To mix a secondary or tertiary colour that will have brilliance. Choose 2 that are as close as possible to the colour you want to mix. The further away on the colour wheel colours are from the colour you want the duller the results will be, e.g. to mix a violet from a red and blue

- Ultramarine blue + permanent rose = brilliant violet
- Phthalo blue + cadmium red = muted violet

## Setting up your palette

*Start with a warm and cool version of each primary colour*

- Yellow - Lemon + aureolin
- Red - Cadmium red + permanent Rose
- Blue - Ultramarine blue + cobalt

*Add some convenience colours as you can afford it!*

- Greens - hookers green, viridian, turquoise
- Yellows – raw sienna, raw umber, Indian yellow
- Blues – cerulean, indigo, Prussian blue
- Red – Alizarin, Australian red gold, Magenta
- Orange - Burnt sienna, Cad Orange, burnt umber

**Happy painting!**