

## Colour Theory

Don't let the word 'theory' put you off. An understanding of basic colour theory and the colour wheel is essential for every artist. Colours are, after all, one of the basic tools of painting. The starting point for understanding colour theory is that there are only **three primary colours**.

### So what are the three primary colours?

**Yellow, Blue and Red** are the three primary colours. They are called primaries because they can't be created by mixing any other colour together. In theory all other colours can be mixed from these three primaries.



### There are many yellows, blues and reds - which do I choose?

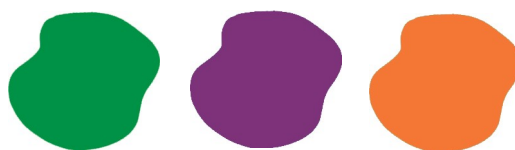
This is where theory and practice differ slightly. The theoretical yellow, blue and red does not exist and is not a colour you can buy. Manufactured paints are 'impure' and all have, to a lesser or greater extent, traces of other primaries and impurities in them. In practice this is not a big problem. You can choose any bright, yellow blue and red and call them your primaries.

### As a beginner then, which would you suggest?

For my students I use the Winsor & Newton **Cotman** student's watercolour range. From this I would suggest **Cadmium Yellow Light Hue, Cobalt Blue Hue** and **Cadmium Red Hue** for your first set of primary colours. If you use another range pick similar bright colours. You can mix a dull colour from bright colours, but you can't make a bright colour from dull colours!

### What happens when you mix any two primary colours?

A mix two primary colours is called a **secondary** colour. Mixing blue and red makes **purple**; red and yellow makes **orange**; yellow and blue makes **green**. There are **three secondary colours**. Their colour (hue) is halfway between the two primaries and can be considered as an equal mix of each.



### What happens if the mix of primary colours is not equal?

These mixes are called **tertiary** colours (**red-orange, red-purple, yellow-green, yellow-orange, blue-green** and **blue-purple**) and are made by mixing a primary colour with an adjacent secondary colour. On the **colour wheel**, the tertiary colours are located between the primary and secondary colours they are made from.

### What about black and white?

O.K. back to the theory for a moment. Black and White are not considered colours. Black is the absence of colour, White is a mix every colour. White light from the sun contains all the colours (quite literally) of the rainbow. With total absence of light our world is dark, all we see is black.

### But I can buy black and white paint!

Of course you can because, in practice, blacks can be made by grinding naturally occurring black substances (called **pigments**) and white from naturally occurring white pigments. Just like primary colours you can't mix black (although you can come very close) and you can't mix white. If you mix every colour together you just get mud.

### If black and white are just like primaries, why aren't they primaries?

Because primary colours when mixed make **different** colours. If you add white to a colour it makes that colour lighter it does not change it. Similarly adding black will simply darken that colour, not change it. In painting blacks and whites are called **tints**. Many watercolour artists don't use black and white at all.

### Should I use black and white?

There are no rules to be laid down here, but I always advise my students against using black and white pigment. Watercolour is a 'transparent' medium, artists allow the white of the paper to tint their colours. Sometimes black paint is used. Because paint is not 'pure' some blacks can make a useful green when mixed with yellow for example. In practice you will not need to mix a 'black'. You will discover how to make those important 'darks' a little later on.

