

Using the Colour Wheel

Sir Isaac Newton created the first colour wheel hundreds of years ago by splitting white sunlight into red, orange, yellow, green, cyan, and blue, then connected the ends of the colour spectrum together to demonstrate natural colour progression.

A century later Johann Wolfgang Goethe studied the psychological effect of colours and discovered that some colours gave a feeling of warmth and others a feeling of coolness. Using these results he created a colour wheel based on the psychological effect of each colour with one side being the plus side of red, orange and yellow and the other side being the minus side of green, violet and blue.

Colour theory was developed further by Johannes Itten, a Swiss color and art theorist at the Bauhaus. He modified the colour wheel using red, yellow, and blue as the primary colours and modifying these to twelve hues including secondary and tertiary colours. The Resene colour wheel works on the same theories as those developed by Johannes Itten.

So you have just picked up a Resene Colour Wheel to help with a colour scheme - feeling confused?

Well let's take a look at how to use this amazing colour tool. You will see the colour wheel is divided into 12 hues.

To start with we will work with 6 hues...

- Primary Colours - Red, Yellow, Blue
- Secondary Colours are made by mixing 2 primary colours together
 - Red + Yellow = Orange
 - Red + Blue = Violet
 - Blue + Yellow = Green

Looking at the back of your colour wheel, move the colour divider to expose only these 6 colours.



You will notice that red, yellow and orange are warm colours, while green, blue and violet are cool colours. So what happens when you put a cool colour and a warm colour together? You get some kind of balance - for example, red and green, orange and blue, yellow and violet. Look at how nature does this..



Red + Green



Violet + Yellow



Orange + Blue

To start we will just work with the six colours as shown on the colour wheel above.

- Primary colours - red, yellow and blue
- Secondary colours - orange, violet and green

complementary colour combinations

Working with opposites on the colour wheel is called a complementary scheme. But we do not always want to work with full strength colours as in the pictures from nature, we may want to tone down the red with white or grey to have a dusty pink, and we might want to work with a dark muted green - it would still be a complementary combination. In the nursery picture, lavender and lemon have been used, while the maroon barn sits well upon the surrounding green pastures.



We will work with Resene EzyPaint to do some theoretical exercises using complementary combinations to start with.

The complementary colours can be very subtle, just a tint of colour in a neutral for example. It is a helpful guideline when choosing a colour infused neutral and can save mistakes.

Here to the left we have a fairly strong red and green combination - Resene Palm Green and Resene Raspberry. However to the right, the colours have been toned down to more muted shades, with a burgundy sofa and soft peppermint green on the walls. They are both complementary schemes.



Complementary schemes can be used anywhere to achieve balance - the art deco building below has orange infused colour on the walls teamed with blue joinery and trim colours. The bedroom has yellow tinted walls and ceiling with complementary violet in various shades on the bedding. In both instances the coolness of the blue and violet is balanced with the warmth of the yellow and orange, yet they don't compete with each other for attention and feel quite harmonious, just the way nature does it.



Both of these rooms are blue and orange - the timber has an orange hue and is combined with the blue textiles, the other is more obviously a blue/orange complementary scheme.



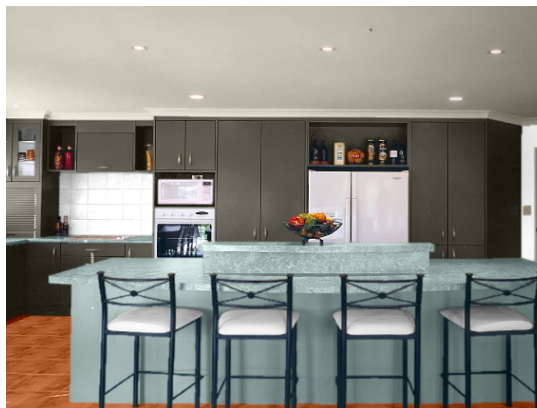
Now we will look at the next six colours by moving the divider around the wheel as below.

These colours are made by mixing the previous six colours together as follows...

- yellow + orange = yellow orange
- yellow + green = yellow green
- blue + green = blue green
- blue + violet = blue violet
- red + violet = red violet
- red + orange = red orange

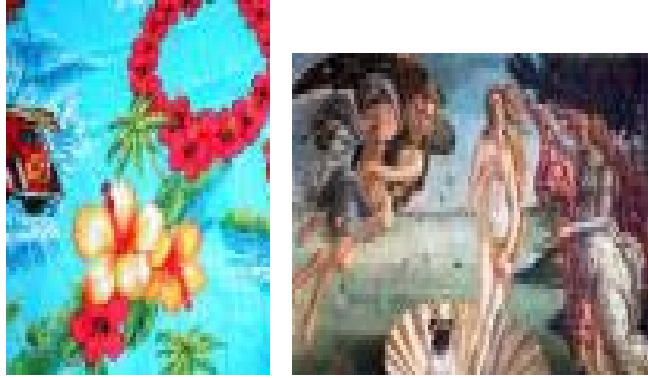


This kitchen is a combination of grey and white as the neutral colours on ceiling and cabinetry with a blue-green (pale teal) and red-orange terracotta tiles on the floor. This is still a complementary scheme using opposites on the colour wheel, working with tertiary colours.



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Fabric designers and artists often use complementary colours in their work. The tropical print above is blue-green with red-orange, and the art incorporates blue and orange and red and green complementary combinations.

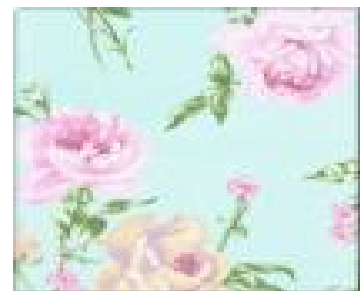
split complementary

Split complementary schemes are where instead of using the direct opposite colour on the colour wheel, you use the colours either side of the complementary. Turn your colour wheel over and select blue as the key colour - its opposite is orange, but the split complementary colours would be yellow-orange and red-orange, so they both have some of the complementary colour in them and that is why they also work well to balance the key colour.



The kitchen above is a split-complementary colour scheme. The bench colour is a dark red-orange and this is teamed with blue and green.

These pastel colours are an example of a split-complementary combination. The key colour is blue-green (pale aqua) teamed with orange (pale apricot) and red (pink).



triadic scheme

So now that we have had a little practice at complementary and split-complementary colour schemes using the colour wheel, we will look at two other combinations. The first one is triadic, this means the three colours to be used are equidistance on the colour wheel from each other.

- Red + yellow + blue
- Red-violet + yellow-orange + blue-green
- Orange + green + violet
- Yellow-green + red-orange + blue-violet



This room is a triadic scheme of red + yellow + blue. The yellow is the wall and ceiling colour, blue sofa's and the red cushions and fireplace. In a triadic scheme usually one colour is used as the dominant colour and the other two as accents.

Here is a great example of triadic combination on the exterior of a building. Red + blue + pale yellow.



Here in this pan of shellfish we see a triadic combination of colours - orange, green and violet.

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related colour scheme (analogous)

The last of our colour combinations using the colour wheel is the related colour scheme, and this is when three or more colours that sit alongside each other are used together. Usually the primary colour sits in the middle of the group for example - yellow-orange, yellow and yellow-green. This way of putting colours together is popular as they all have the same hue in them, but they can be of differing intensity. You will find this type of scheme is often used in textiles and graphic design. Look through some magazines and you will find lots of examples of related colour schemes.



Blue + blue-green + green is a popular related colour combination and often described as tropical.

Here are some more examples of related colour combinations. Using your colour wheel identify which related colours make up these pictures.



This bathroom is another example of a related colour scheme -violet + blue-violet + blue. Again the transition between the colours is quite smooth. The sunset on the right is made up of red-violet + violet + blue-violet.



Green + yellow-green + yellow



Red-orange + orange + yellow-orange

monochromatic (one colour) & achromatic (no colour)

There are two other schemes, one is mono-chromatic which means only a single colour is used which is mixed with black, white or grey to give variations of that colour i.e. tints and shades. Often a variety of textures is used in a monochromatic scheme to add interest. And if no colour is used, only black, white and grey, this is called achromatic, and again variations of intensity and the introduction of gloss levels or texture are needed to make it work.



The sophisticated bedroom above and the building to the right are achromatic - no colour, only black and white.

This is an achromatic scheme on this villa - black, white and grey only have been used.



This house has a monochromatic scheme - only one colour has been used and it sits perfectly in its environment. A tint of green (green + white) has been used on the walls and darker green on the roof which is a shade of green (green + black).



Monochromatic (blue-green only) but not boring with a feeling of movement created with differing shades and tints.



Predominantly black and white rooms - can you live without colour in your life?

