

THE COLOUR THEORY

There are many aspects of design that we have to have in mind when creating products. One of the most important aspect and an absolute fundamental part of any design is the colour theory.

Most people decide whether they like a product or not in only 90 seconds. It is said that 90% of that decision is based on the colour of said product. So you can see how big of a role the colour plays in any product design.

Im going to talk about the colour theory, technical terms and the best ways to use it in our designs.

Lets start with the basics! First up are the primary colours witch are blue, red and yellow. Next we have the secondary colours. Those are the colours you get when you mix together the primary colours i.e. orange, green and purple. Lastly we mix those colours together and get six tertiary colours. All of them together make the colour wheel.

Next up are the basic terms in colour theory. Understanding these terms can make it easier for us to make good design.

BASIC TERMS:

HUE: another word for colour - note that white, black and grey are not called hues.

TINT: Hue with white added

TONE: Hue with grey added

SHADE: Hue with black added

TEMPERATURE: Warm or cool hues

WARM: increased red and yellow hues

COOL: increased blue and green hues

SATURATION: Intensity of the hue or in other words - how subtle or vibrant the hue is

VALUE: How dark or light the hue is ranging from black to white

So, how can we use the colour wheel and the basic terms in our designs? The best way is to look at the formulas called colour harmony.

COLOUR HARMONY:

MONOCHROMATIC: One colour used in different saturation and value

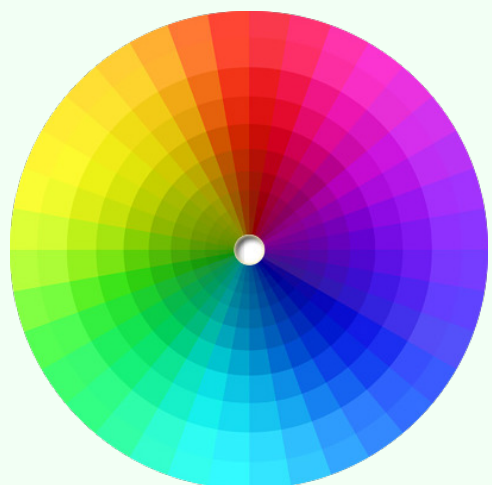
ANALOGOUS: Use colours that are next to each other on the colour wheel.

COMPLIMENTARY: Use colour that are opposite each other on the colour wheel.

SPLIT COMPLIMENTARY: Use colours on either sides of the complimentary colour pair to soften the contrast.

TRIADIC: Use colours evenly spaced on the wheel forming a perfect triangle.

TETRADIC: forms a rectangle on the wheel - two complimentary colour pairs used. This is best displayed when one colour is dominant and the other three are supportive.



But there is important to keep in mind that colours appear different on different background. So we have to know on what kind of background the design ends up on. Are we printing it or is it a web site?

There are several colour models but we are going to take a look at the 3 most important ones.

When we design print we use the CMYK model. That stands for Cyan, Yellow, Magenta and black. This is a subtractive model so when we mix cyan, yellow and magenta together they absorb all colours and make black. The reason black is there as well is because it is too expensive to always have to mix all three colours together to make black in print.

The next two models are most used in digital design. These are RGB and HSB.

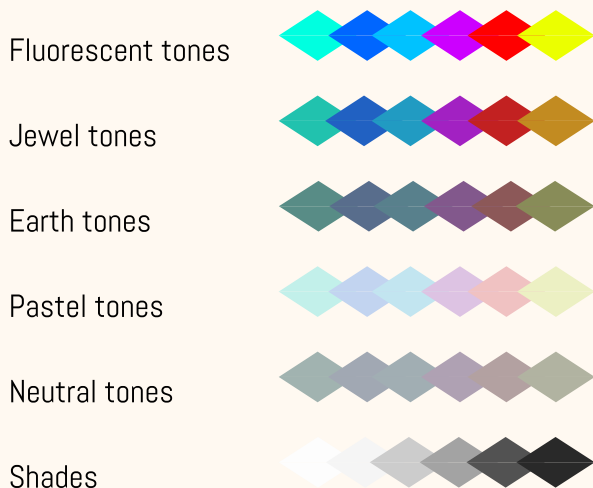
RGB stands for Red, Green and Blue. Each shade of each colour is represented by a number ranging from 0 to 225. In this model, black is 0 0 0 and white is 255 255 255 so it can represent more than 16 million colours. This is an additive model because red, green and blue are additive colours. Mix them all together and you get white.

Last but not least is the HSB model. This model is most used by UI designers. The H stands for hue or the colour, S is saturation or how vibrant or subtle the colour is and B is brightness. When styling a design in CSS we can add the A or Alpha to determine the transparency of the colour.

6 COLOUR CATEGORIES

There are 6 colour categories that designers most often work with. Knowing them and how to mix and match different categories is key to a good design.

They are:



Examples of GOOD category combos:



Lastly we have to think about what we want to represent and how the user is suppose to feel when looking at the product. Humans attach certain feelings to certain colours and it is important to have that in mind when choosing a colour scheme for our projects.

For example we tend to attach violence, danger, importance, passion and romance to red. Yellow is often attached to happiness, sunshine, energy and hope. Due to the earthy tone in green, it is often associated to growth, new beginnings, renewal and abundance. And lastly, blue can represent sadness, calmness and responsibility.

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