**Colour in the Digital World**

You may remember learning at school that the primary colours are red, yellow and blue. It’s known as the [additive colour system](https://en.wikipedia.org/wiki/Additive_color) and it’s a method of creating colours by mixing a number of different colours with red, yellow and blue.

**So why do printer inks and toners use different colours?**

It’s because, in the digital world, the primary colours are red, green and blue. The secondary colours (cyan, magenta and yellow) are used to create prints using a [subtractive colour system](https://en.wikipedia.org/wiki/Subtractive_color). Here, colours are created by subtracting parts of the light spectrum present in ordinary white light.

**Let’s get mixing**

In the real world, when we work with pigments, we have to mix the primary colours to create another colour.

Red + Blue = Purple

Blue + Yellow = Green

Yellow + Red = Orange

But when working with pixels in the digital world, mixing the primary colours creates this result:

Blue + Green = Cyan

Red + Blue = Magenta

Green + Red = Yellow

It can take a bit to wrap your mind around the logic of getting yellow by mixing red and green. But that’s the way printers work.

**From printer to page - How does your printer work to make these colours?**

Inkjet printers use inks that are sprayed to create the printout. Laser printers use a laser beam that hits the drum. This generates an electromagnetic charge which the toner powders stick to. The drum rollers then melt and fuse the toner powder to the paper. This is why laser printouts are more precise and durable around moisture than inkjet printouts.

*Why use black?*

Printers use four colours - cyan, magenta, yellow and black (or CMYK). Why black? After all, plenty of colours can be made with cyan, magenta and yellow.

Black ink is used for two main reasons. First, it allows for much darker colours to be printed. Second, businesses tend to print a lot of text which usually appears in black so having a dedicated black cartridge helps you save money.

The team at [Cartridge Extra](http://www.cartridgeextra.com.au/) are experts in printer inks and cartridges. In fact, they are happiest when helping you with your in-house printing questions and requirements. Plus, they can usually save you money by offering generic or refilled printer cartridge options.

For advice, pop into the store or call us on (02) 8084 2567.

To place an order, visit our [website](http://www.cartridgeextra.com.au/order-now).

For anyone who is really keen on learning more about how colours work, here are some links:

<https://en.wikipedia.org/wiki/Additive_color>

<https://en.wikipedia.org/wiki/Subtractive_color>

<https://en.wikipedia.org/wiki/Color_mixing>

<https://en.wikipedia.org/wiki/RGB_color_model>

<https://en.wikipedia.org/wiki/CMYK_color_model>

Do you want more detail about how laser printers work?

<https://www.explainthatstuff.com/laserprinters.html>

<https://computer.howstuffworks.com/laser-printer.htm>

<https://computer.howstuffworks.com/laser-printer9.htm>