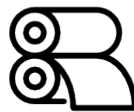
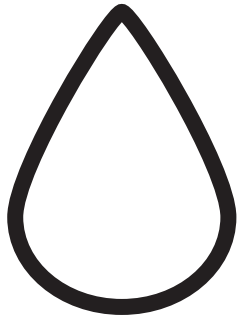


Digital Printing

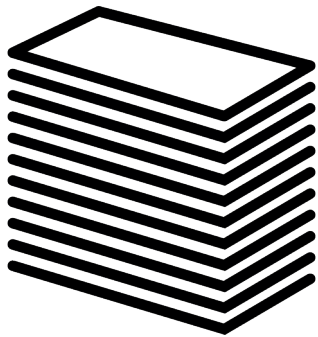
for Designers



Using new technologies to be more sustainable



As we learnt last week, the graphic design process often requires a great deal of natural resources in its printing stages.



Lithographic printing, used for large scale work is important to understand for your future work after this course.

The litho process, and reliance on metal plate production and large machinery means its far too expensive for running small jobs.

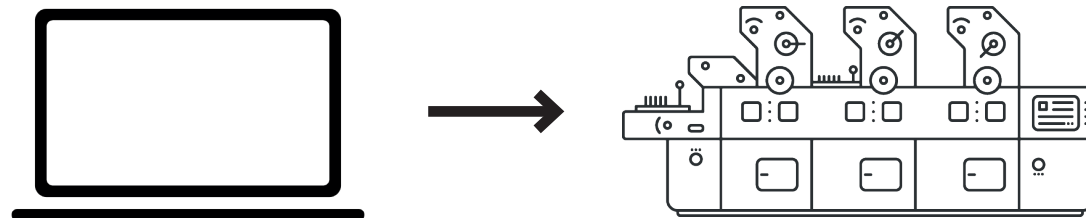
Today we will look at the alternative.

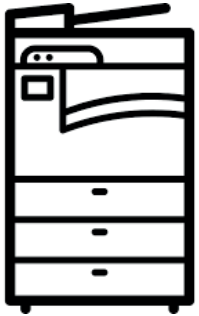
As a ballpark, think 500+ copies generally requires litho printing

The Digital Press

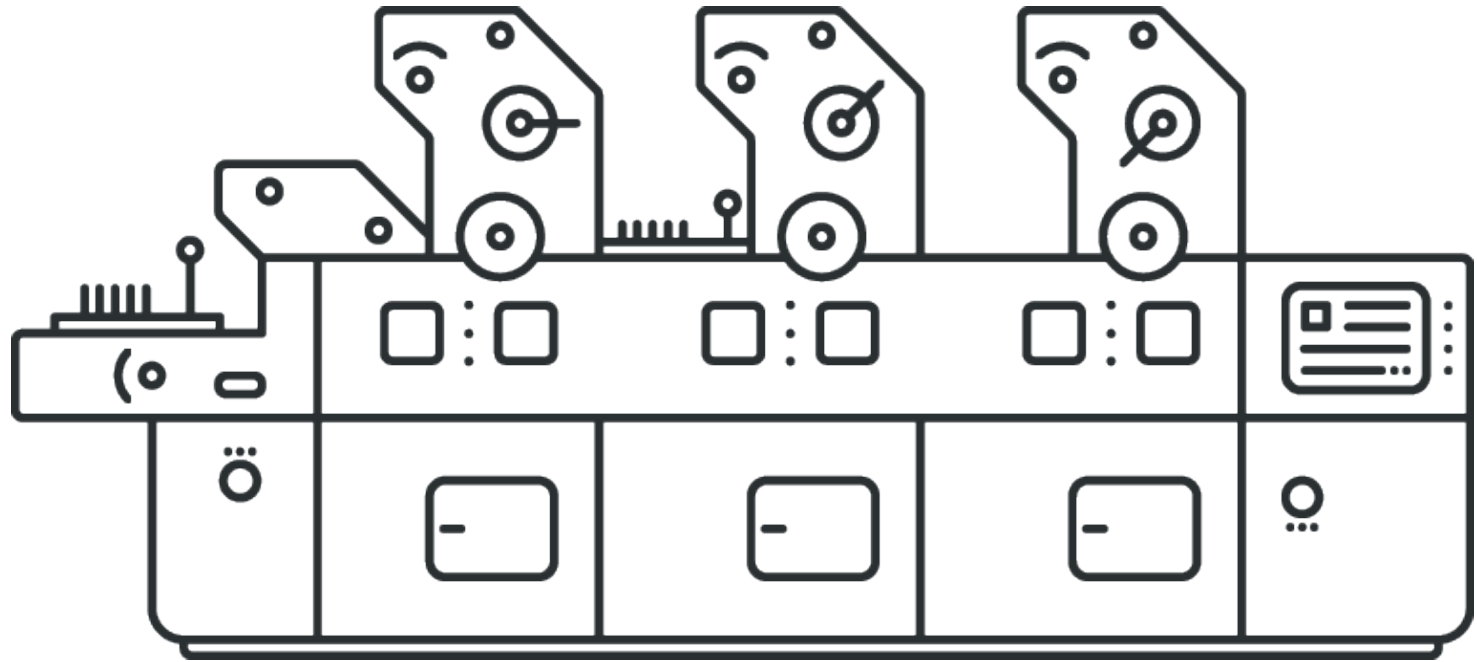
Gradually, litho is being pushed out by the introduction of digital presses.

This new technology cuts out the need for printing plates, as the file is sent digitally to the printer itself.





Copier



Digital Press

The right machine for the job

Ink vs Toner

A fundamental difference between a copier and a press is in the inks used.

A digital press uses inks much like a lithograph press does. The inks are a wet solution that dries into the paper stock to achieve a print.

Copiers use toner, which is a dry powder, fixing to the papers surface to create an image layer.

You can feel the difference, and do the 'crack the surface' test.

Plateless

Fewer core materials needed
in production

Low cost for low volume

Less investment in setup results in
lower cost, low volume work

Quick turnaround

Digital file straight to the machine
cutting down processing time

Key Sustainable Points of Digital Printing

Print on demand

These digital presses also allow for a print on demand service, meaning an end to the days of having thousands of spare copies of printed materials.

No set up time or costs allow one-offs to cost the same per copy as a large run of thousands.

Variable data printing

Top of the range digital presses can use data collection to customise print files during a print run.

This allows designers the ability to create artwork that speaks directly to the end user.

Variable data printing

Instead of producing 10,000 copies of a single document, delivering a single message to 10,000 customers, variable data printing could print 10,000 unique documents with customized messages for each customer.

For instance, 10,000 people could sign up to a magazine subscription, and each copy could be custom printed, with their name on the cover.

Variable data printing's impact on Sustainability in Design

This has huge plus points in terms of sustainability. We can cut down on over-printing by printing exactly the number required.

We can also use this technology to select key pages that interest the specific user, and print just those pages. This could cut wasted printed work massively.

The development of these large scale digital presses has also meant great leaps in the 'special finishes' you can achieve at relatively low cost.

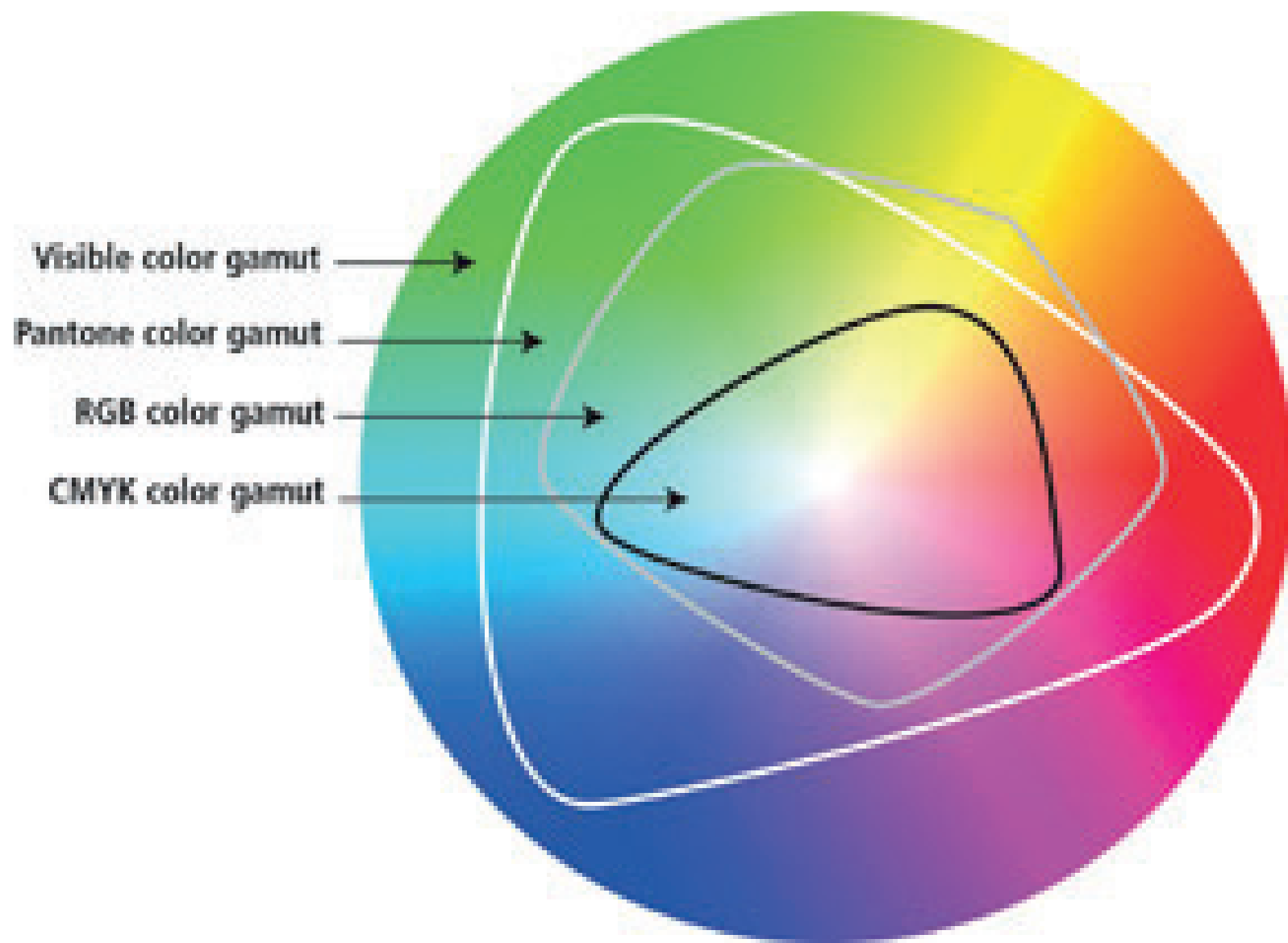
The machines work with the 4 colour heads 'CMYK' as a traditional press would, but can be easily extended to allow for a 5th colour...6th colour...

...which can be used to create all sorts of fantastic print finishes.

‘5th Colours’

You could set it up to recognise a specialist swatch like a neon ink or specific brand colour. These are known as ‘**spot colours**’.





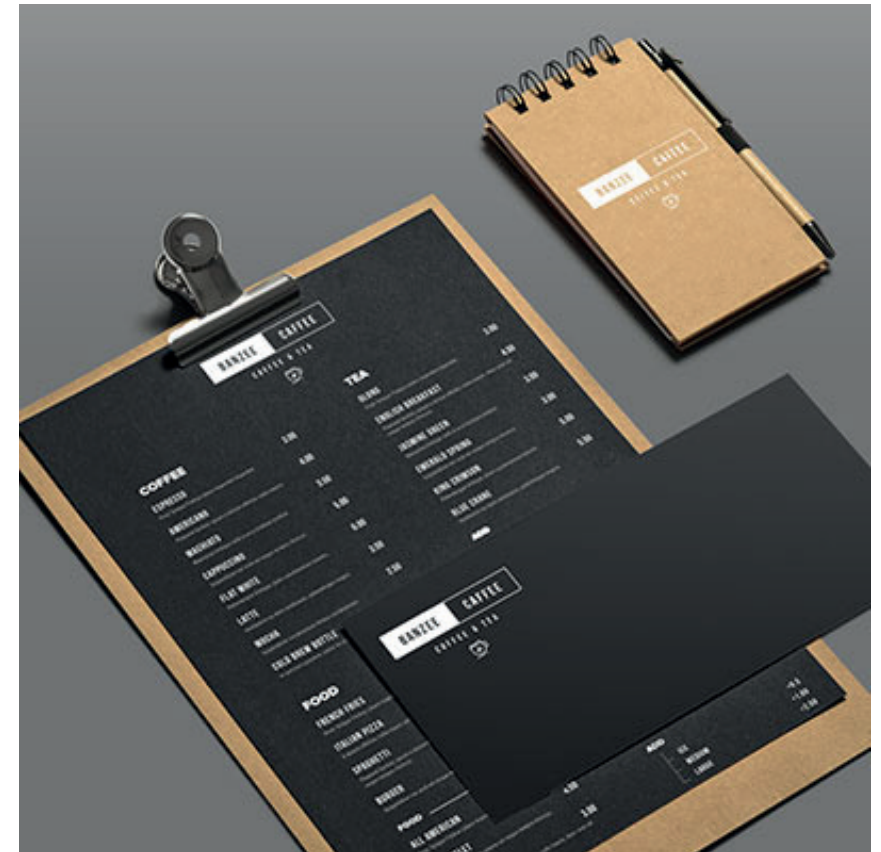
How to set up a Pantone colour

You can access the range of pantone colours in illustrator by:

Window > Swatch Library >
Colour Books

Beware: There are 2 pantone sets. 1 for coated, 1 for uncoated paper.

You can also set it up to achieve a **White Ink** finish to allow you to print on coloured paper stock.



You can even achieve foiled finish
with **metallic inks**.





Spot Varnish

Spot varnish, sometimes referred to as Spot UV, is essentially a layer of clear gloss, added to a print surface to emphasise a particular area.

It can be added in a range of different ways to create varying finishes.

Standard thin
layer to emphasise



It can also be added in thick layers to create raised textures.

How to set up a 5th colour

When setting up a design with a 5th colour ready to send to a printer, you must set the file up a VERY specific way.

The machine will read the digital makeup of the document, and theres no room for error.

Ticklist - Setting up

Create a New Layer called 'SpotUV'

Open the swatches palette and double click the swatch 'CMYK Magenta'

Change the colour type to 'Spot Colour'

Re-name the swatch 'SpotUV'

Check all varnish areas are on the new layer, filled with this new swatch.

Ticklist - Saving the Artwork

Check all fonts are outlined.
Then go to:

Window > Attributes

Tick 'Overprint Fill'

This tells the printer to scan the PDF for a 5th colour

Save as a PDF

Specifically a 'PDF/X-4:2008'

This may vary between printers, but the printers we are using is set up to the 2008 version

Today

Take a look at your designs from last week. Can you enhance your work with the use of Spot Varnish?

Can you use it to grab the users attention?

Draw the eye to a specific point?

Enhance the imagery?

Encourage interaction with the print?