

Y9 Graphics: Knowledge Organiser

Y9 Graphics Key Words

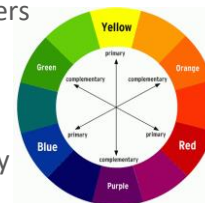
Enhancement	Using tone, colour or texture to make a drawing look more like the real object
Typography	The design of lettering and the layout of type on printed or digitally published media
Portfolio	A folder showcasing your best design work
Branding	Creating a unique name and image for a product
Corporate Identity	The consistent use of a company's logo, typestyle and colour scheme across all of their products
Illustration	A hand or digitally created image which explains, visually represents or merely decorates a product or publication
Die-cutting	The process used to cut and crease printed packaging nets and uniquely shaped
Image manipulation	Editing and changing the properties of a digital image using graphic software
Aesthetics	The look, style and visual appeal of a product
Microns	The unit used to measure the thickness of board
Acetate	A clear polymer film often used for windows in packaged products
Bitmap	A digital image made up of a grid of pixels
Vector	A digital drawing made using paths which does not deteriorate when scaled up in size
Process Colours	The 4 colours used in colour printing (Cyan, Magenta, Yellow and Black) to reproduce a wide range of colours
Special colours	Colours that can't be achieved successfully using the four process colours
Tone	How light or dark a colour appears
Sublimation Printing	Dye-sublimation printing uses heat to transfer images onto specially treated products like mugs or T shirts

The Design Process

Design Brief	
Task Analysis	A mindmap to explore all elements of the designing/making tasks ahead
Customer Profile	An outline of a typical user of the product being designed
Primary Research	Gathering new data that has not been collected before using surveys, questionnaires or interviews
Secondary Research	Gathering existing data that has already been published from sources like the internet and magazines
Research Analysis	A summary of important findings from each area of research
Specifications	
Initial ideas	A range of quick sketches in response to the design problem
Development	More detailed drawings which explore and refine better ideas
Modelling	Hand generated or CAD/CAM models to prove construction methods
Final idea	
Plan of Make	A flow chart or illustrated guide to how the product will be made
Manufacture	
Testing	Comparing outcomes to the original specification
Evaluation	
Modifications for Industry	Details of how the product/design would need to be modified to be produced in industry

Basic Colour Theory

The **colour wheel** is used by designers and artists to help them work with colours when using paint/ink.



The **Primary** colours (red, blue and yellow) can't be made by mixing any other colours together.

Secondary colours are made by mixing two of the primary colors together. If you mix a secondary and primary colour you get a **tertiary** colour.



Complementary or **contrasting** colours are opposite each other on the colour wheel. They are more intense and vibrant when placed next to each other and compete for attention.

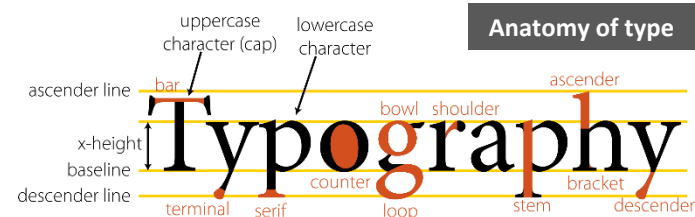


Analogous colours are near to each other on the colour wheel. They are often found in nature and appear to be **harmonious** with each other.



Lettering plays an important part in our everyday lives. Different typefaces can express a wide variety of feelings and emotions.

Font styles fall into 4 main categories:



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Dye Sublimation Printing of Mug

Dye-sublimation printing uses heat to transfer images onto products like mugs, fabric and T shirts. These have to contain **polyester** or have a polyester coating for this method to be successful.

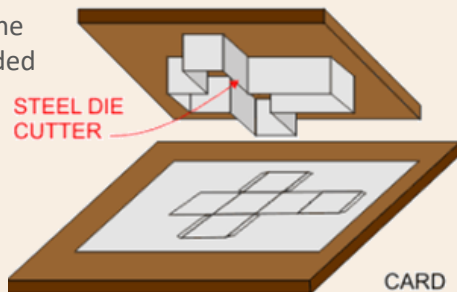
- Create design using graphic software
- Print mirrored image onto sublimation transfer paper
- Trim print and secure with image side to mug using heatproof tape
- Carefully place mug in press and start timer
- When timer alarm sounds press button to silence it
- Carefully remove HOT mug from press, peel off paper and immerse in water to cool down



Die Cutting

Die cutting is the process that is used to cut and crease printed material. It is done by inserting sharp blades (**press knives**) into a sheet of thick plywood (**press forme**). This is then placed on top of the printed material and pressed down to stamp it out.

Creasing is done by using rounded blades instead of sharp ones.



Offset Lithography Printing

This is the most popular printing method and is used for printing magazines, posters, packaging and books.

To create a **full colour** print of an image the **4 process colours** are printed over the top of one another:

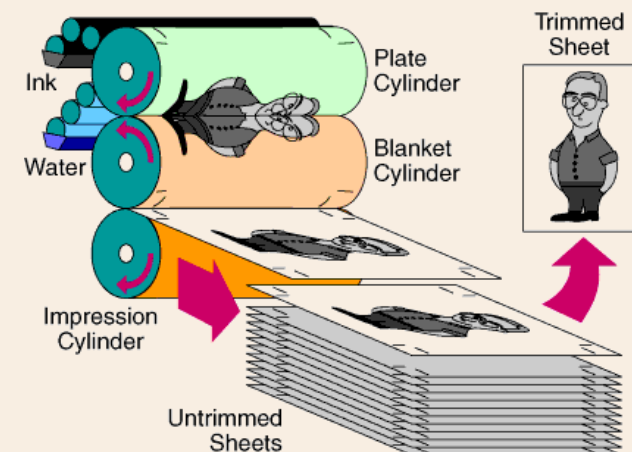


Image to be printed goes through colour separation process to make **CMYK** versions of the image.

Printing **plates** are made by shining UV light through the CMYK images onto aluminium that is coated in special photo-sensitive film.

The aluminium printing plates are **flexible** and **durable**. Each one is placed onto a cylinder and the relevant ink applied to it using rollers. There are 2 types of ink; **oil-based** is more traditional but not environmentally friendly. **Water-based** are now more common and biodegrade easily.

Paper is then fed through the rollers either as single sheets (**SHEET FED**) or on one continuous roll of paper (**WEB FED**) – this is much quicker but is only used for longer print runs.



Quality Control

Quality Control is a very important part of making high quality graphic products. In printing, there are 3 main quality assurance methods that are quality checked as the products are being printed. If they are inaccurate or faulty the printing method will be adjusted before printing can carry on.

Registration Marks

Symbols that are placed exactly in the same place on each of the 4 printing plates. If they don't match up or look blurry then the plate alignment will need to be altered.



Colour Bars

These are added to the side of a print job and allow the printer to check the density (**tint**) of the inks to make sure they are correct – this is done using a densitometer.



Bleed

Usually the printed image is 3mm larger around the edge to allow for a small margin of error when trimming to size – this is called the **bleed area**.