

*Fortrose  
Academy*



# Higher Graphics Course Notes Desk Top Publishing

# Colour theory

Colour is used extensively within all areas of graphics. Different effects within the same layout can be achieved easily with the appropriate application of colour.

It is important you are familiar with the **colour wheel**, the different effects colours have and how they work together.

## The Colour Wheel

All colours are derived from the **primary colours**—**yellow, red and blue**— and are a result of mixing two of these together. This in turn produces **secondary colours**—**green, orange and violet**. When a secondary colour is mixed with a primary colour, a **tertiary colour** is produced.

### Harmony

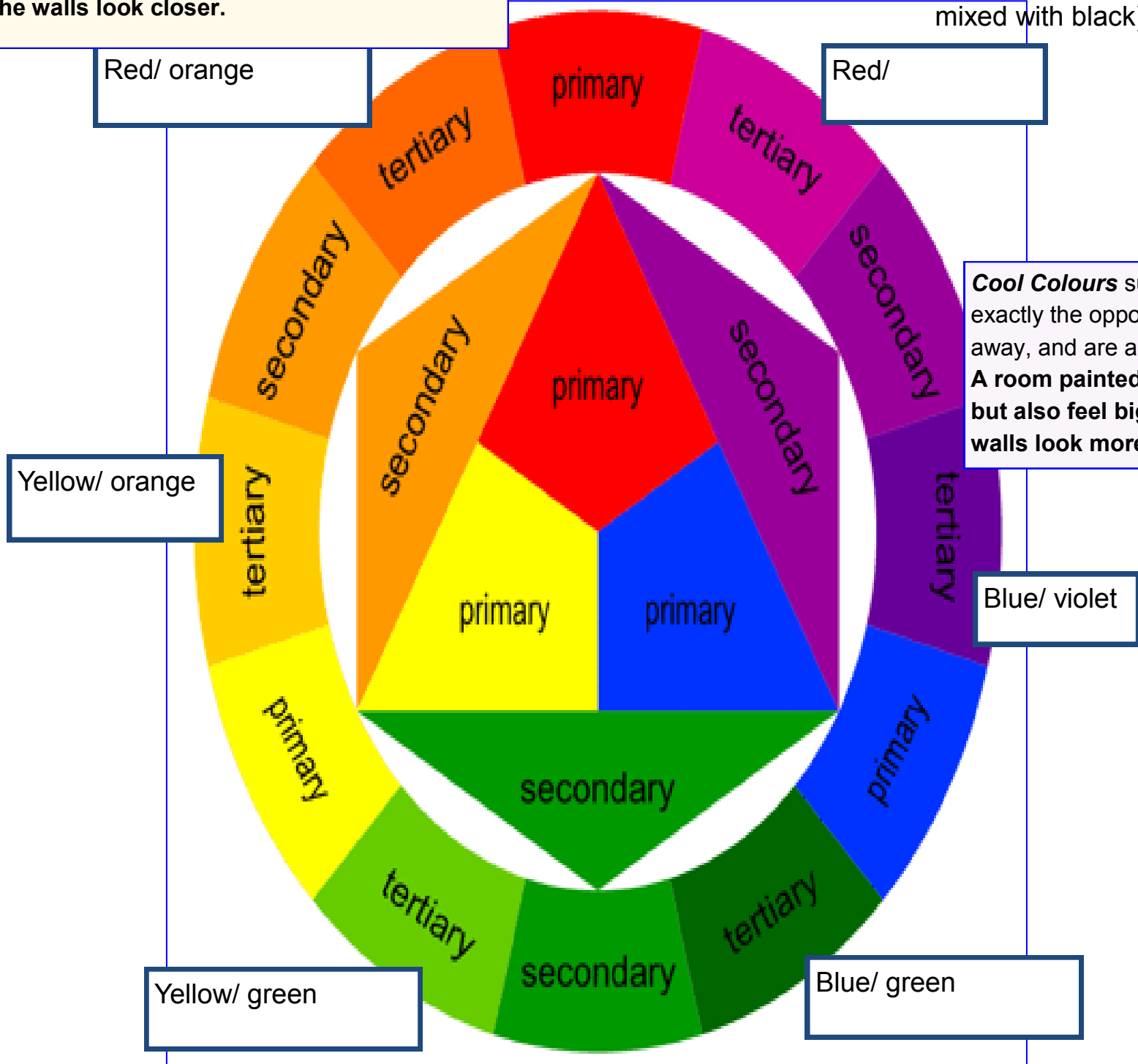
Colours which are close to or next to each other on the colour wheel are said to be in **harmony**. They **harmonise** with each other. They are **harmonious**.

### Contrast

Colours which are opposite to each other on the colour wheel are said to be **complimentary**. They are **contrasting colours**.



**Warm Colours** such as **reds, yellows and oranges** are also known as **ADVANCING COLOURS** because they appear to be closer to the viewer than other colours. **A room painted in these colours would seem warm, but also feel smaller because warm colours make the walls look closer.**



## Layout techniques

**Tone**—this term describes lighter or darker versions of the same colour:



**Tint:** a lighter tone is a **tint** -(a colour mixed with white)

**Shade:** a darker tone is called a **shade** - (a colour mixed with black)

**Cool Colours** such as blues, greens and violets have exactly the opposite effect. They appear to be further away, and are also known as **RECEDING COLOURS**. **A room painted in these colours would appear cold, but also feel bigger as these colours make the walls look more distant.**

Colours and Moods

Red:

warm, exciting, dangerous, passionate

Orange:

warm, happy, sunny

Yellow:

warm, happy, cheerful, bright, sparkling

Green:

cool, restful, fresh, calm, natural, quiet

Blue:

cool, elegant, sophisticated

Purple:

rich, pompous, regal

Neutrals: Greys

natural, restful, elegant; Browns - natural, earthy, safe

Black and white:

dramatic, elegant, stylish, sophisticated

# Design Elements

## Line

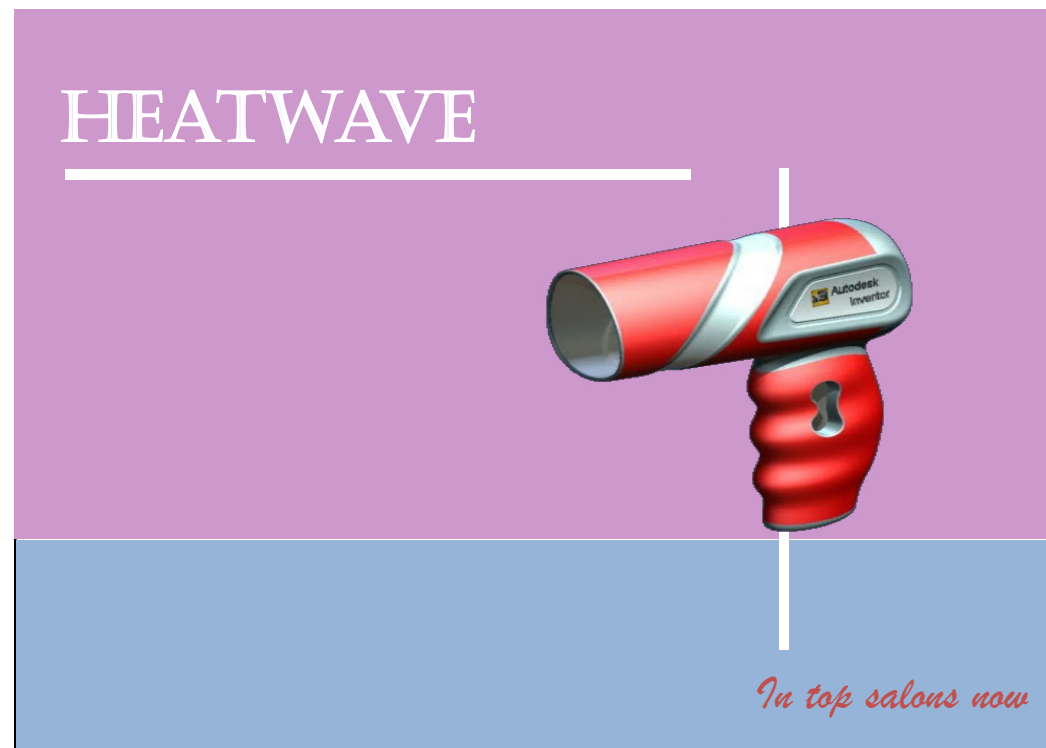
The use of **line** can be an important and effective technique to enhance a page. They can be used to **connect** parts of the layout, create **emphasis** on certain items and **separate** parts of the design from others.



This layout is quite **disconnected**—the text and the product are unrelated to each other and the different colours of the background appear separate from the hairdryer.



The use of the two sets of lines brings repetition to the display, and links the product on the right hand side with the text on the left. The lines also link both coloured parts of the layout together.



By simply applying two thin lines, the viewer's eye is led along the page from the product name to the slogan at the bottom right. The vertical line passes behind the product, so linking it to the slogan and the light blue background of the layout. This also brings depth to the display.

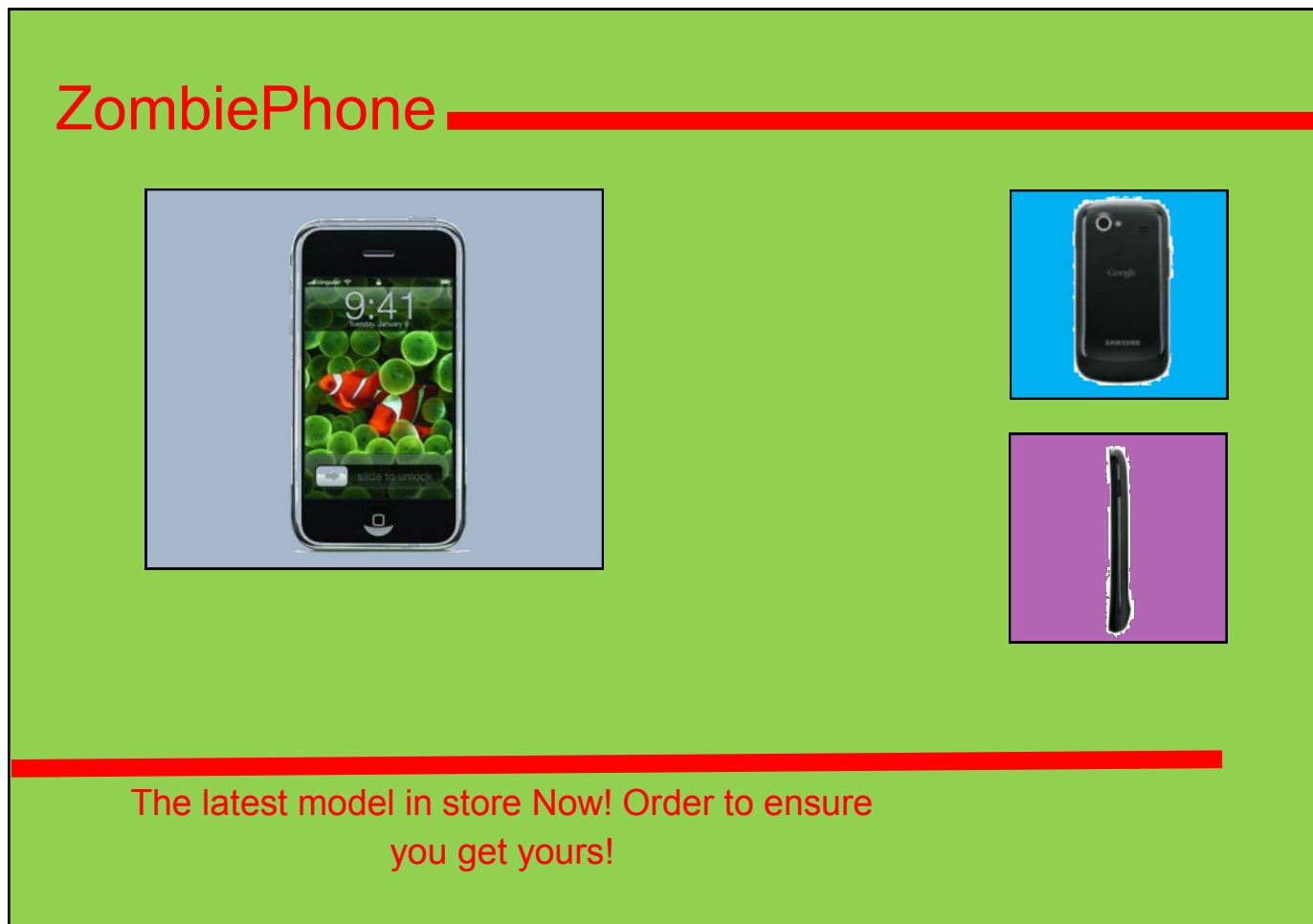


The wavy lines in this layout make it feel less formal and more vibrant than the other two layouts. An impression of movement is created here and again the reader's eye is taken to the slogan at the bottom.

# Design Elements

## Shape

As most layouts take the form of squares and rectangles, it is effective to use different shapes within the design. The use of circles for example, are useful for bringing contrast to a layout and creating visual interest. This is especially true if the product being advertised has straight edges, in this case a mobile phone.



This layout is very straight and rectangular in structure. All the graphic items are in boxes, and the shapes of the product are also rectangular.

The red lines further add to this feel, and the display is not very eye-catching or exciting.

It lacks visual impact.

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This layout has is more vibrant and eye-catching as circles have been applied to it. The circles contrast well with the rectangular outlines of the phones and make them stand out more.

The straight red lines have been replaced with wavy lines and this gives a feeling of movement and contrast to it.

A change of font for the slogan further adds to the contrast in shape—it is less 'straight' than before and harmonises well with the circular shapes now adopted.



# Design Elements

## Colour

The use of colour can have a dramatic effect on the impact of graphic layouts. Colour combinations should be considered, and not just colours in isolation. Colours working together are what makes a difference. If colour combinations are effectively applied, they can:

- Give visual impact to the layout
- Suggest a mood
- Unify a layout
- Make a product stand out
- Connect the product with a target market

You should be familiar with colour theory, which is covered elsewhere in your notes.

This colour scheme predominantly uses **tones** of the same colour—blue.

This unifies the display and contrasts well with the red of the product—so creating visual impact.

The red of the product is used in the two items of text—this now becomes the **accent colour**. This unifies the display and also creates brand awareness as it is the same as that of the hairdryer.

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The application of colour combinations does not work effectively here—too many colours are used. The colours are in conflict with each other, and make the layout confusing to read. It is also difficult to read the slogan at the bottom.



### White space

White space does not need to be white; it refers to a blank area or empty space on a page.

There are three main reasons for including white space in a layout:

- It calms a layout and makes a busy layout less busy.
- It can make an item in or near the white space stand out more—it gives that item **emphasis**.  
It can allow the reader's eyes to rest. This is advantageous if the layout is busy.



This colour scheme only uses the colours of the hairdryer product. This means no 'extra' colours are used and they work well together to create a harmonious feel.

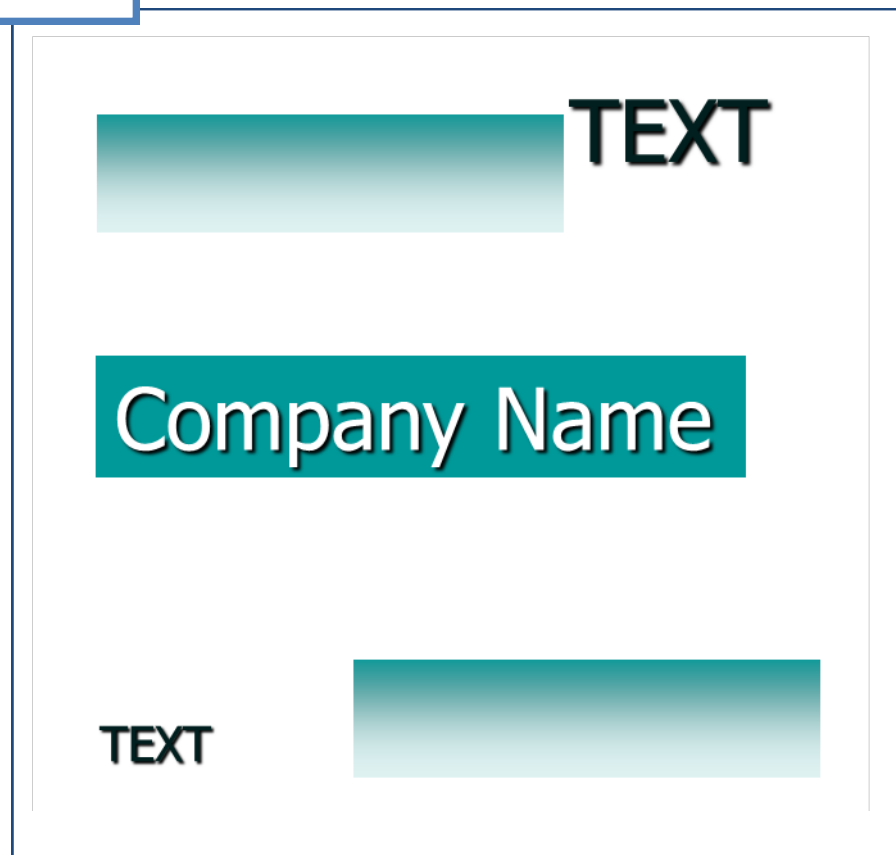
The light grey of the flashbars is effective in giving depth to the layout and makes the product stand out.

It is easier to see the slogan at the bottom now a single colour gradient has been applied to it.

# Design Elements

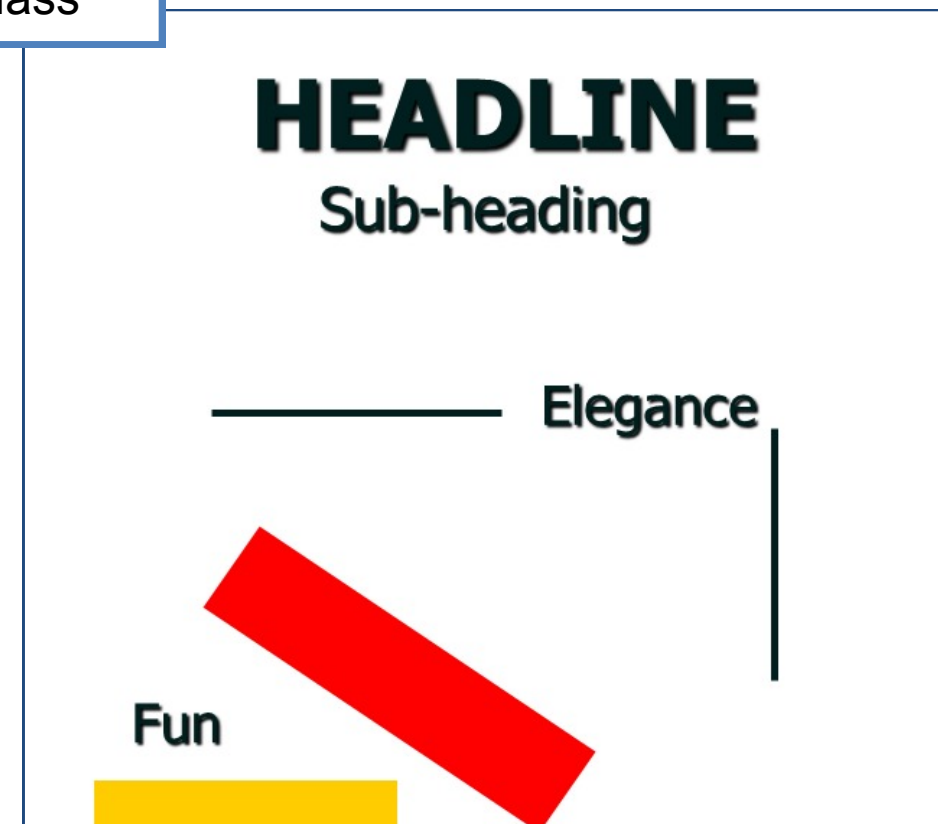
## Mass, value and texture

### Value



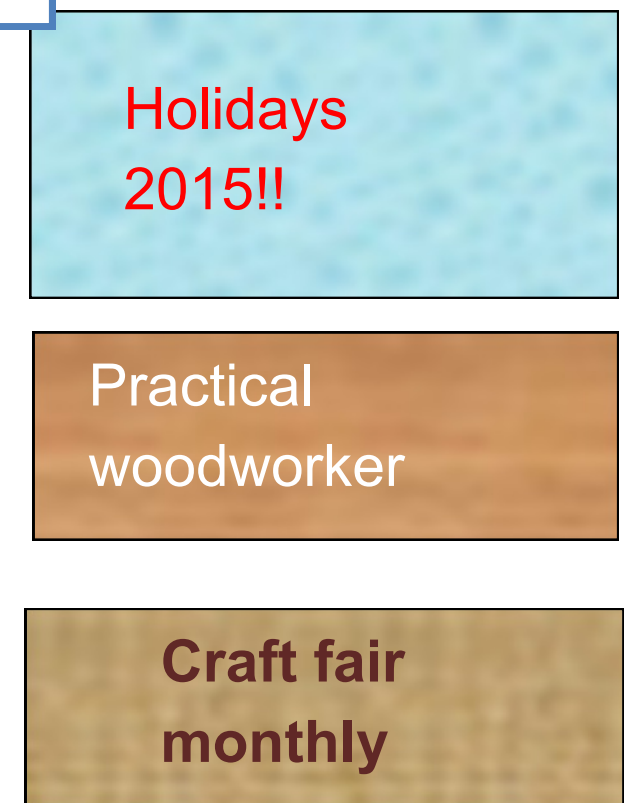
This deals with the use of colour tones in a layout. Darker tones have a higher **value** and setting them against light tones makes a graphic display more dramatic.

### Mass



All items in a layout have a **mass**. A bold heading has a greater **mass** than a small sub-heading. Lines and colour fills add mass but thin lines bring a formal elegance, while heavy blocks of colour can show

### Texture



Texture can be considered in two ways: **Physical texture** is provided by the smoothness or coarseness of the paper.

**Visual texture** is the pattern in images such as the pattern of tree bark in a photograph.

# Design principles

## Balance

It is quite straightforward to understand and apply the principle of balance in a layout.

Most layouts are based on a rectangular shape. If the advertised product is placed in the centre, there are two areas to fill—each either side of the graphic.

Layout [1] has been balanced **symmetrically**—if you divided it in half vertically, each side would be essentially the same.

1.



This **symmetrical** layout is quite difficult to follow, and text items are spread over the page. This can make it difficult to read the text and there is little 'flow' to reading the layout.

2.

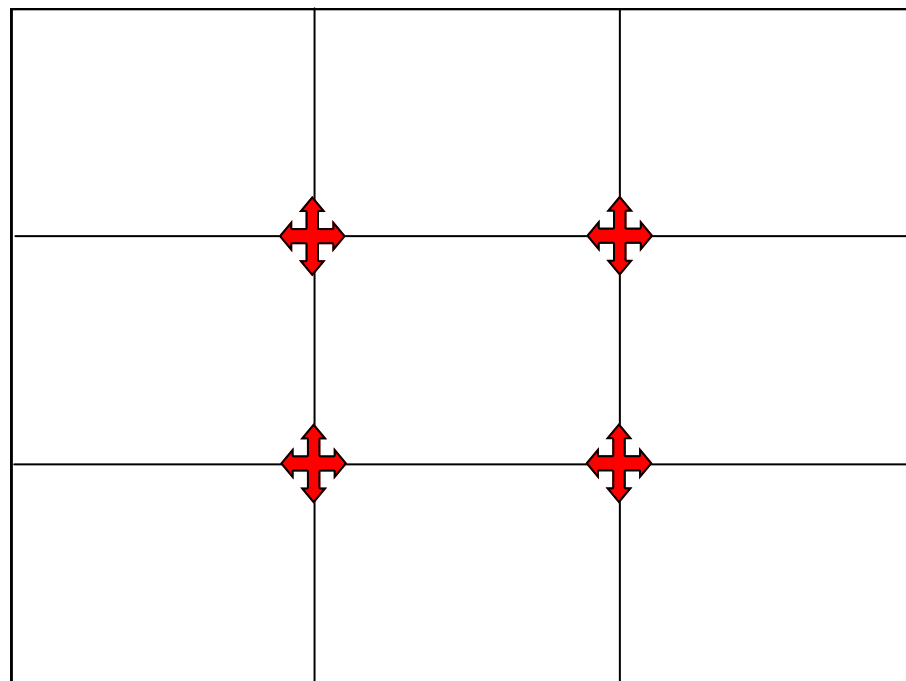


This **asymmetrical** layout is more eye-catching. As the text is positioned to the left and the graphic to the right, the layout 'flows' better.

### The Rule of Thirds

If a space is divided into 9 equal rectangles, the four lines dividing the space provide **focal points**. If objects are and text are placed here or close to these lines, a more visually effective layout can be produced.

The points where the lines cross are called **impact points**, and these are key areas to place important features.



3.



Some small alterations have been made here to further improve the layout. The text is grouped more together than before, the product has been enlarged and a shadow effect has been applied. The 'HeatWave' text has been reduced slightly in size and also moved to the left.



# Design principles

## Unity, repetition and harmony

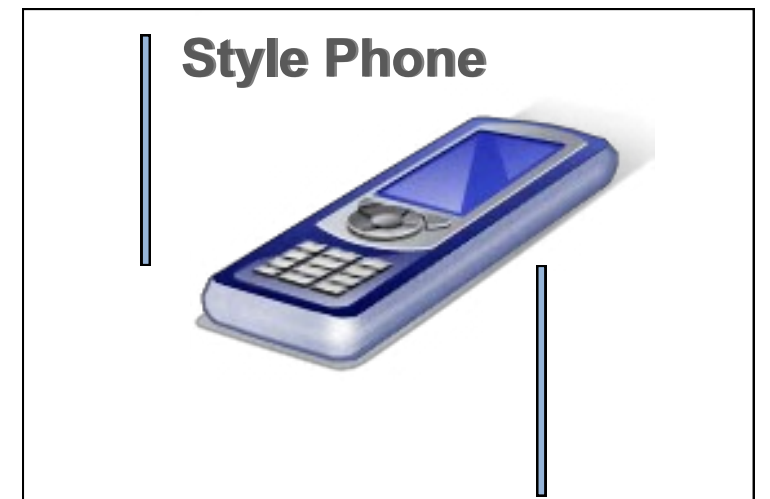
As layouts usually consist of different graphic items and text, it is important to connect these different elements together within the layout so that they appear linked and together.



Unity is achieved here by overlapping the image onto the text. This makes a physical connection between the image and the text.



The same effect is achieved here by positioning the image over the lines



The repetition of the thicker blue lines with black outlines creates unity here. The use of a similar colour to the graphic is also a unifying feature.



By overlapping the image onto all three areas of the layout, unity is achieved. Again, a harmonious colour is effective in contributing to this effect and the flashbar connects the text to the image.



The three circles are filled with a similar colour to the graphic. The repetition of these circles creates a unifying effect to the layout.



By wrapping the text around the image, the layout is unified and connected.



Colour, repetition and positioning of graphic are used here to effect to create a unified layout.



# Design principles

## Alignment

Alignment is an effective method to improve the structure of a layout. Good alignment makes a page easy to follow and organised and helps make it neat and sharp.

1.

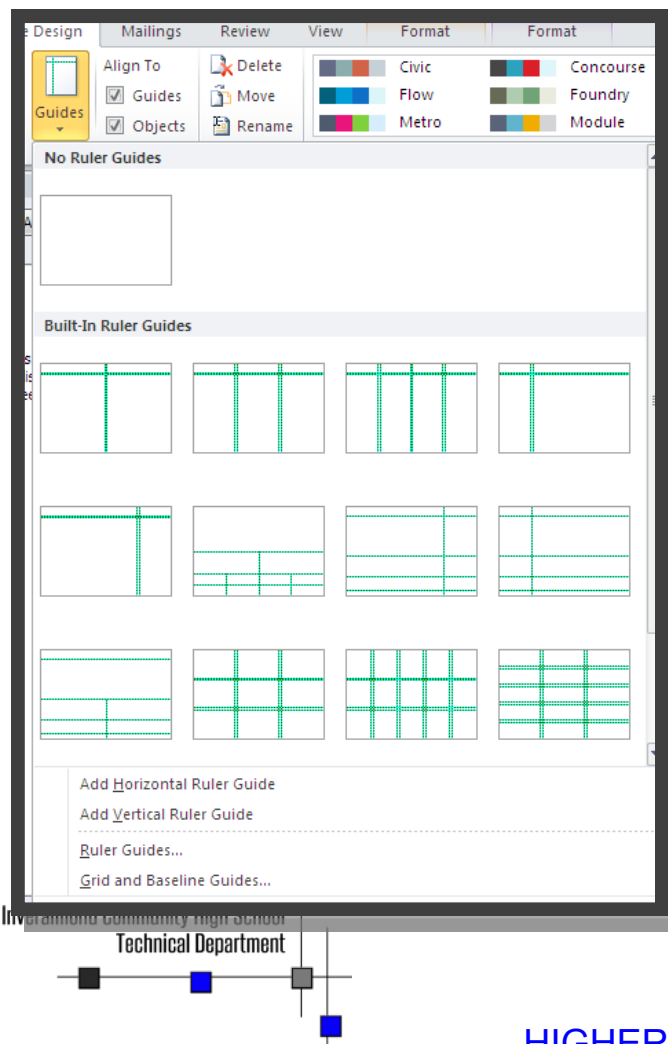


This layout [1] is poorly aligned. The impression given is one of disorganisation, and it appears messy and ill-structured. The image and various items of text are almost scattered around the layout, and it becomes difficult to take in the information.

2.



Once guidelines are added to the display [2], one can see how poorly aligned the graphic items and text are. The guidelines illustrate where alignment can be achieved with edges of items.



This screenshot from Publisher shows how using a layout guide and the 'Snap' tool can effectively and easily enable alignment to be achieved in the display. Such a guide has been applied to the layout in [3]. One can see how the edge of each item and text is aligned with another.

3.



4.

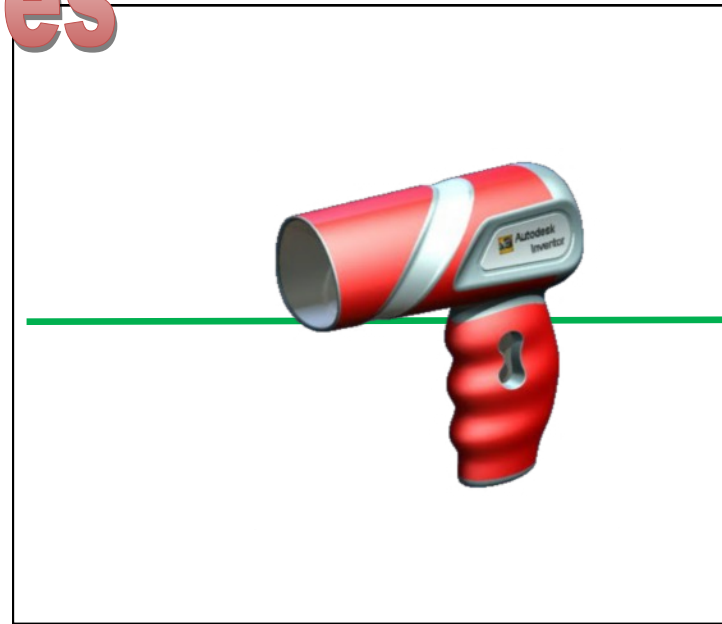


This layout [4] has the guidelines removed and demonstrates how effective good alignment is to a display. Compare it with the original layout [1] and note how it is more structured and organised.

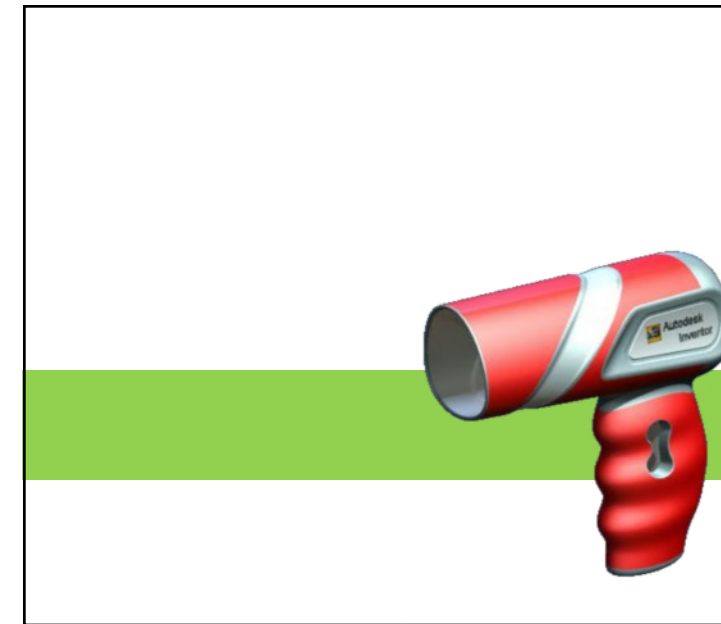
# Design principles

## Depth

As layouts are produced in a 2D format—usually a page—it is important to create an illusion of **Depth**. This illusion stimulates the layout and makes it more eye-catching. There are several methods to achieve an impression of depth.



If a **pictorial** view of the product is chosen, it appears to have more depth than a simple 2D view. Another simple method of creating depth in this layout is the application of a single thin line behind the hairdryer, making it look as if it is closer than the line.



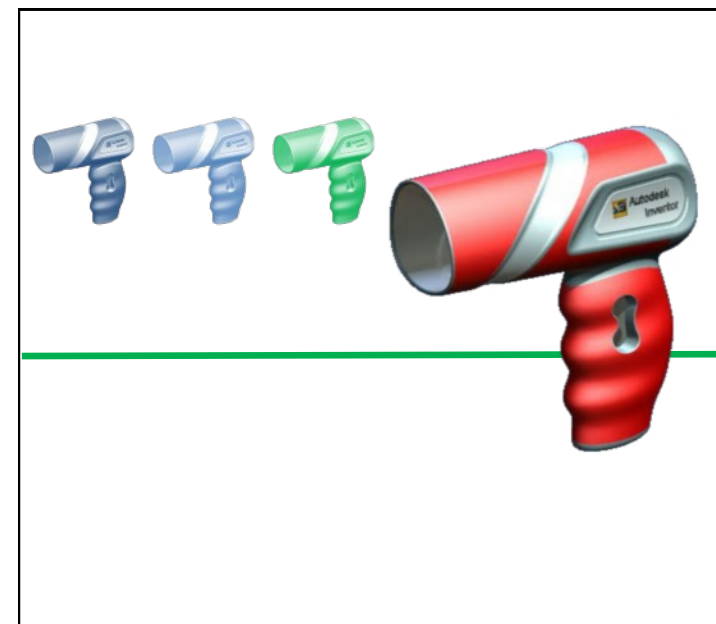
The same effect is achieved here by placing the product onto a coloured shape. As green is a **receding** colour, the effect is to push the hairdryer into the forefront of the layout—which makes it eye-catching.



Using the **Drop Shadow** tool in this instance creates depth in the layout by making it appear that the product is standing out from a back ground.



By applying an image as a background, depth is brought to this display. It is important to consider the style of the background to successfully achieve this, and in this one a blue washed out colour doesn't take away the emphasis on the hairdryer.



By placing the hairdryer in the forefront of the layout with smaller images of the same product next to it, an impression of depth is created.



By placing the product in front of the text, an impression of depth is created and the hairdryer is brought to the forefront of the layout.

# Design principles

## Emphasis and dominance

As graphic layouts are often looked at hurriedly by a reader, it is important to attract their attention quickly. If a page has no focal point or is generally bland, the reader shall ignore it and move on.

As a layout may contain several items of text and graphics, a strong **focal point** must be provided to centre the display around. This is normally the graphic or photograph on the page.

**Dominance** is when one item of the layout stands out more than the others.

**Emphasis** occurs when one item is made more eye-catching.

These are the three rules of order to dominance in a layout:

1. The main graphic or image should dominate the layout.
2. The title, heading or product should be next.
3. Less important items should be grouped and positioned effectively to support this order.

This layout has no item achieving overall dominance; as it is advertising the 'Boost' drink then the bottle should be the main item the viewer notices.

In this case, the bottle is 'swamped' by the other features in the display—the slogan and the athlete are perhaps the most noticeable features. The font size of the 'Boost' is almost the same as that of the slogan.



Some simple changes have been applied here to make the product become the dominant feature and emphasise the product name:

- The bottle has been enlarged and put off-centre. This immediately attracts the reader's attention.
- The athlete has been reduced in size, and re-located to the top left corner. She still contributes to the layout, but does not take over.
- The crowd silhouette has been faded slightly and put more behind the bottle—this is acting as a flashbar so giving the layout more depth and pushing the product forward.
- 'Boost' has been underlined to emphasise the product name more effectively
- The line at the bottom gives further dominance to the bottle and leads the eye to the slogan—which has been reduced in size.
- A gradient fill has been applied to the background. This has the effect of making the items in the layout stand out more and not be overcome by the starkness of the original solid background.





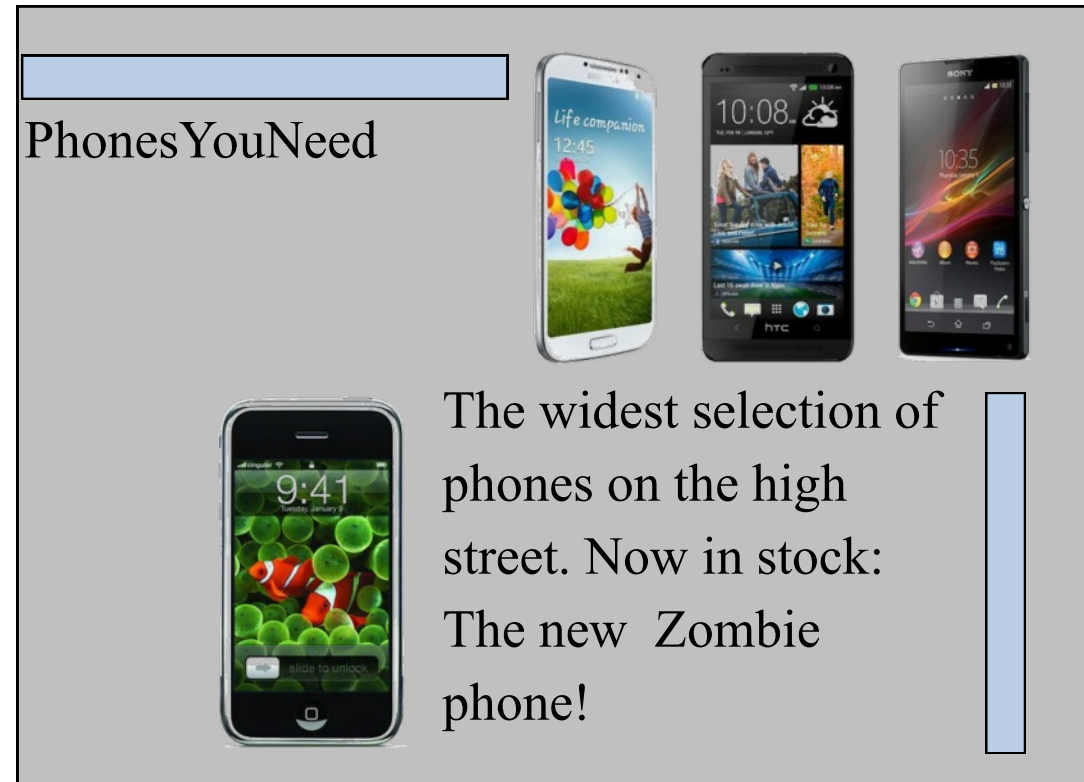
# Design principles

## Contrast

The purpose of a designed page is to grab the reader's attention—this is especially true in promotional graphics where the layout is competing against other adverts and products.

An effective way to achieve this is through the use of **contrast**—especially by comparing opposites.

Opposites can be between colours, horizontal and vertical lines and between shapes—such as circles and squares.



This promotional layout provides no occasions of contrast. The black text is almost lost against the grey background. The page is aligned well, but the straight shapes of the phones and the coloured shapes give the page a very grid-like feel and nothing in particular stands out.

This layout is different however. The display has a much more vibrant feel to it; the red wavy lines contrast strongly with the rectangular shapes of the phones, and by increasing the size of the main image and tilting it the phone grabs the reader's attention. By applying a gradient fill to the flashbar the red text of the company's name stands out more. The use of a circular background for the product information contrasts with the straight lines of the product and flashbar and grabs the reader's attention.





# Desktop Publishing (DTP)



**Desktop Publishing (DTP)** enables the production of magazines, newspapers, books, promotional literature etc. to be created on a desktop computer or laptop. The **publishing industry** creates these documents and the physical paper documents are produced by the **printing industry**. The design is the result of the work of the **graphic designer**.

## Benefits of DTP to the Graphic Designer

Graphic designers nowadays operate on a very flexible basis— work can be produced anywhere and any time using modern technology and sent to the office via the internet.

Modern DTP packages allow exciting and imaginative displays to be very quickly and easily created. The main benefits DTP software brings to the graphic designer are:

- It is simple to make modifications to images such as colour, shape and formatting.
- Further modifications to the design can easily be implemented on behalf of the editor or client.
- The grid structure templates within DTP software enables designs to be created accurately and quickly.
- Design proposals can be sent to the editor or client electronically to save time. Their responses can be returned this way.
- The graphic designer can work from home. This saves travel costs and environmental impact of their journey.

## Benefits of DTP to the graphics industries

As there is great competition among newspapers and magazines in the market and the circulation of most printed newspapers is declining, DTP provides many advantages to the industry:

- Proposals and final editions with full designs and images can be sent quickly electronically. These can then be forwarded onto the printer in this way.
- News reports can be sent from anywhere in the world email.
- The time it takes to design and publish a document is greatly reduced. Modifications can easily be made by the editor and sent to printer.
- Common features within a publication can be quickly produced via templates such as footers, running headers etc.

## Benefits of modern printing methods to society

The advent of modern methods has had a major impact on the printing industry. Traditional methods were very labour intensive and large numbers of people were employed in various roles such as print-setters, labourers and engineers. The amount of semi-skilled workers has been reduced, although there is now great demand for highly skilled operators as more reliance is placed on computer controlled design and production. The new technology has also had an effect on the industry's environmental impact:

- Modern printing methods are more energy efficient than previous means.
- Many publications provide an electronic or online edition. This reduces the amount of paper and ink required
- Most publications use paper which can be 100% recycled as a result of modern printing technology.
- Modern inks are more environmentally friendly and less quantity is required. Inks are now based on vegetable oil rather than on petro-chemicals.
- The quantity of paper and inks required is digitally controlled. This reduces waste.



## DTP techniques

## Bleed

This main image bleeds off the printing area and through the margin. This creates an informal feel to the page.



## Colour fill

Contrast and harmony can be achieved by formatting the text box appropriately. These two text boxes use a blue/ grey fill which harmonises with the main picture, but contrasts with reds used in the headers.

## Column rule

This column rule gives this page a more formal look, and separates these two sections.

## Reverse

The body text colour is black. The text of the subheading has been reversed, and the box filled with a darker colour. This creates contrast and gives the page interest.

## Header

This is called a **running header**, and appears on every section of the magazine.

SPECIAL FEATURE



Declaring war on the 'dull' music scene....

## KASABIAN

## Headline

The headline introduces the article. In this case, the bold fonts create emphasis, and the reverse text on the blue/ grey fill gives it visual impact.

## Drop capital

This larger first letter signifies the start of the article. The use of reverse also attracts interest.

## Margin

Margin—the space at the side and bottom of the page where there is no text or graphic.

**K**asabian burst on to the British music scene in 2004 with the release of their eponymous debut album. Disgusted with the clean living 'non' antics of the current groups of the time—Coldplay, Keane, etc.—they vowed to bring back some of the excitement and glamour that had been sorely missing. They have since gone from

strength to strength, becoming the major attraction at festivals over the years. As guitarist Serge says: "Oasis have gone. We are the biggest band in Britain now. Kasabian are to headline the Isle of Wight and Rockness festivals."

Page 6

Festivalseason.com

## Gutter

This separates columns, and helps to de-clutter the page.

## Excitement...what it is all about

SPECIAL FEATURE

## Lead singer Tom explains the Kasabian philosophy

Where do you prefer to perform?

Scotland—the crowds are always up for it and go mental.



Lead singer Tom

Why do you hate some other bands' boring attitudes?

All rock bands have a responsibility to live the life of a rock star—who wants to hear about Chris Martin's vegan diet or the Fratellis going to bed early? People want an escape from the grinding routine of life, and we'll give them.



Favourite festival?

T in



KASABIAN

## Heading

This introduces a separate section of the article.

## Tilt

This image is tilted, which catches the reader's attention. It creates a modern feel, which will appeal to the youthful target market.

## Caption

Gives information about the image.

## Sub-headings

These break up the large section of body text. The use of the accent colour produces a visual rhythm.

## Text wrap

As it suggests, the text wraps around the image.

## Cropped image

This is an image with the background removed. It creates a more interesting shape.

## Page number (folio)

Page 7



# Desktop Publishing



## Text

Text is obviously used throughout a publication, and it is put to different uses to satisfy particular requirements of the piece. **Headers** and **footers** appear at the top and bottom of the page respectively, and give information, such as date, page, the feature concerned, etc. **Headings** and **titles** give an introduction to the article, and **subheadings** divide the article into smaller sections. **Pull-quotes** draw the reader's attention to the article and **captions** explain an image or photo. The main body of text is called **body type**, or **body copy**.

## Typeface

Fonts are in two styles— **serif** and **sans serif**.

M H S

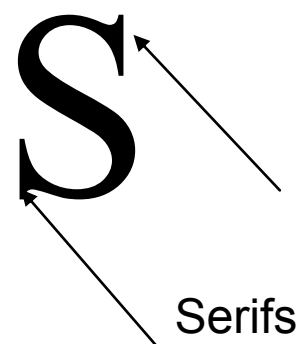
Serif text—they have a line crossing or tail between the two free ends of the stroke.

This creates a serious/ formal look and is often used for the body text in quality

M H S

Sans serif—a typeface without serifs.

This creates a less serious,



Serifs

## Examples of fonts

Times New Roman  
Baskerville Old Face  
Century Schoolbook

Serif fonts

Arial  
Europa

Sans serif fonts

Arnold Bocklin  
Gospel

Fun fonts

Contrast can be created in a publication by using a sans serif font for the title, and a serif font for the main body text. A good 'rule of thumb' when deciding on font styles is **keep it simple** - use 1 sans serif font for headings, subheadings and captions, and 1

HIGHER NOTES

## Text formatting

Text size is measured in **points**.

### 22 point bold text

14 point regular text

**Bullet points** can make the piece more 'snappy', especially

#### ROOMS

- En suite WC
- Sky TV

An **indent** is a good way of signifying the beginning of a

This year's T in the Park may have one of the lowest key line ups in recent years, with few major stars of note.

Last year, the presence of the mighty Kasabian, global superstar JayZee and even Madness kept up

A **drop capital** indicates the start of the article and indents the main body copy next to the drop capital:

Last year, the presence of the mighty Kasabian, global superstar JayZee and even Madness kept up the festival's reputation as

A **hanging indent** uses a drop capital, but indents the rest of the column underneath:

Last year, the presence of the mighty Kasabian, global superstar JayZee and even Madness kept up the festival's reputation as one of

**Left-aligned text** can make the publication appear more sophisticated. It is the most

Last year, the presence of the mighty Kasabian, global superstar JayZee and even Madness kept up the festival's reputation as one of

## Desktop Publishing

**Justified text** produces vertical lines on each side. It gives the text a strong visual shape, but can create unwanted hyphenation and exaggerated word spacing.

Last year, the presence of the mighty Kasabian, global superstar JayZee and even Madness kept up the festival's reputation as one of the best.

**Right-aligned text** can look sophisticated and is often used for subheadings and

Last year, the presence of the mighty Kasabian, global superstar JayZee and even Madness kept up the festival's reputation as one of the best.

**Centred text** creates a symmetrical column of text, but is difficult to read and

Last year, the presence of the mighty Kasabian, global superstar JayZee and even Madness kept up the festival's reputation

**Text wrapping** allows text to be placed around an im

Last year, the presence of the mighty Kasabian, global superstar JayZee and even Madness kept up the festival's reputation as one of the best.



## Text/Typeface/Font

There are different ways of organizing text which are used globally. This is referred to **justification** or **alignment**.

### Aligned Left

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

### Aligned Right

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

### Justified

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

### Centered

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

## Copy/cut/paste

When you take an image/piece of text etc. and copy it from one place to another. Cut is when you delete something from its original location and paste it somewhere else.

Shortcuts: Ctrl C / Ctrl X / Ctrl C

## Handles

Handles are the parts which appear when you select an image. By moving these you can manipulate the image in many ways i.e. changing the size or rotating an image.



## Colour Fill

This is when you take a shape with an outline and fill it in with a colour this is shown in the images below.



Before col-

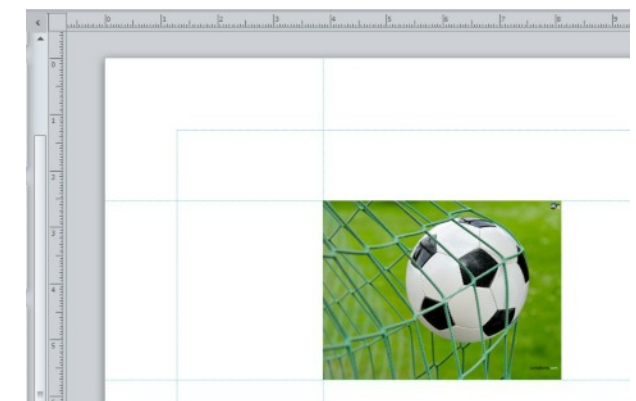


After colour

## Guidelines

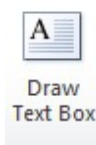
Guidelines are guides which you access via your rulers on your page. They act as a guideline for aligning images/text etc.

You can select **Snap to Guidelines** which will allow your image to automatically jump to meet with guidelines you have positioned on the page

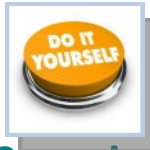


## Text Box

A text box is what you would insert into a page in order to input text into your document. It should look something like the image shown.







## Cropping

Cropping is a tool which allows you to delete unwanted parts of an image. You can crop an image by pulling in the sides or by cropping around the outline of the shape as shown in the second cropped image



Original image



Cropped Image



Cropped Image

## Rotate

Rotate is when an image is rotated like the beach ball shown in the second image. You can rotate an image/text to any specific angle you wish



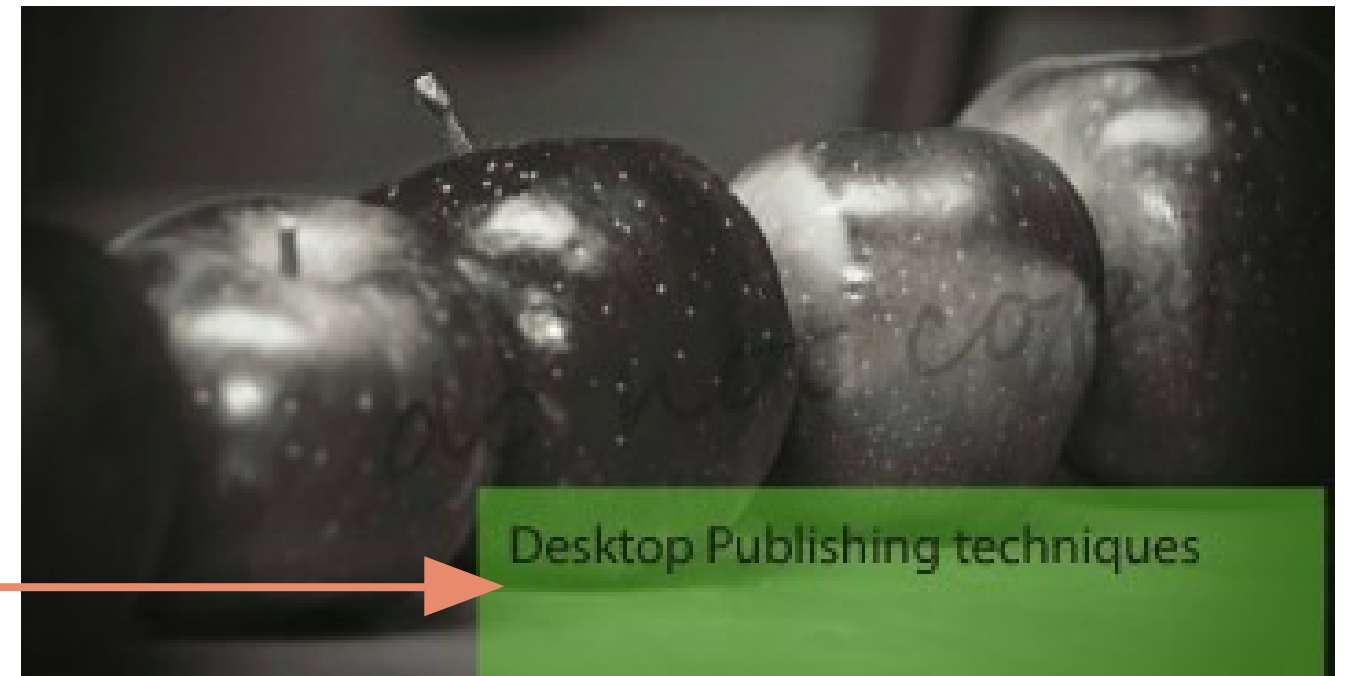
Original image



Rotated image

## Transparency

When you make an image/text/ block of colour etc. 'see-through' so that you can see anything positioned behind



## Desktop Publishing

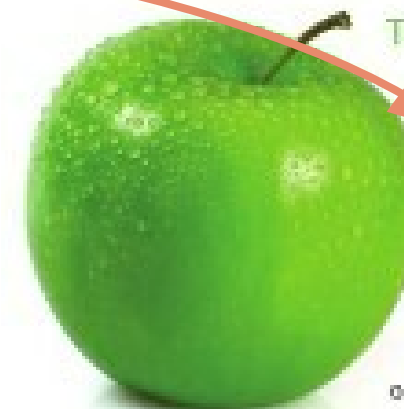
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## Text Wrap

When you alter text to wrap around an image or shape



## Text Wrap

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## Drop Shadow

When you make an image/text/ block of colour etc. 'see-through' so that you can see anything positioned behind

## Drop Shadow

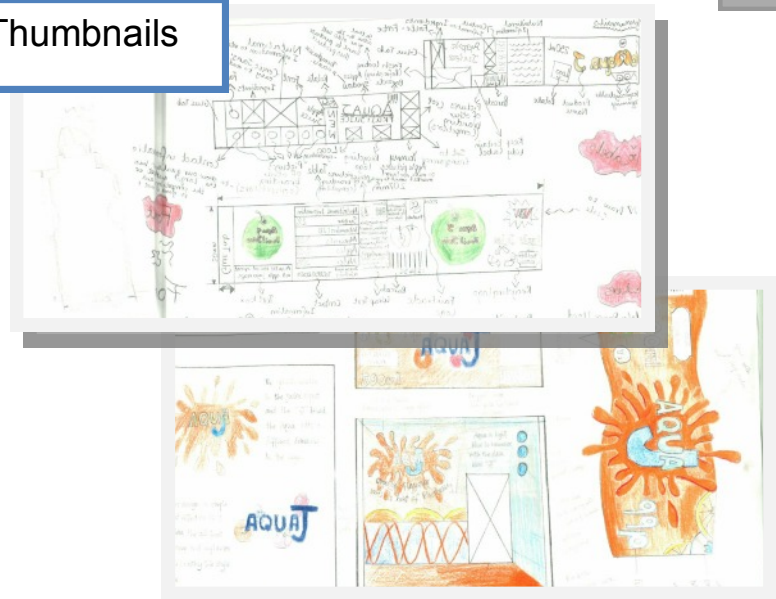
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# DTP Planning strategies



Register marks and crop marks

Thumbnails



These are the PRELIMINARY graphics one uses to plan out and consider different layouts for the DTP brief. A development of ideas should occur and the quick sketches should be well annotated—comments reflecting the designer's thoughts.

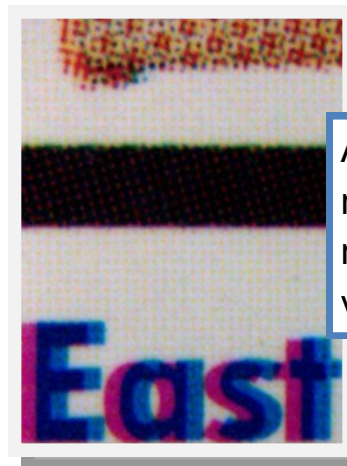
Proof (pre-press)



This is the proposal submitted to the client by the printer before a full **run** commences. This gives the client the opportunity to assess its suitability before it is printed. A **hard proof** involves a paper copy and a **soft proof** is via electronic means.



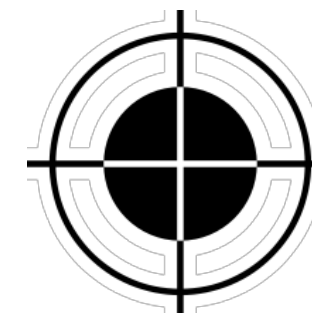
**Register marks:** When printing an image that has more than one colour, it is necessary to print each colour separately and ensure each colour overlaps the others precisely. If this is not done, the finished image will look fuzzy, blurred or "out of register" (see image to right). To help line the colours up correctly, a system of registration is necessary.



An example of registration misalignment, note the cyan and magenta plates are not in the exact place. Also halftones are visible on the top area.



Exaggerated example of a mismatch of CMYK registration



A commonly used registration mark. Although it seems black in colour the actual value should be C=100,M=100,Y=100,K=100



# Vector graphics v. Bitmap/ Raster graphics



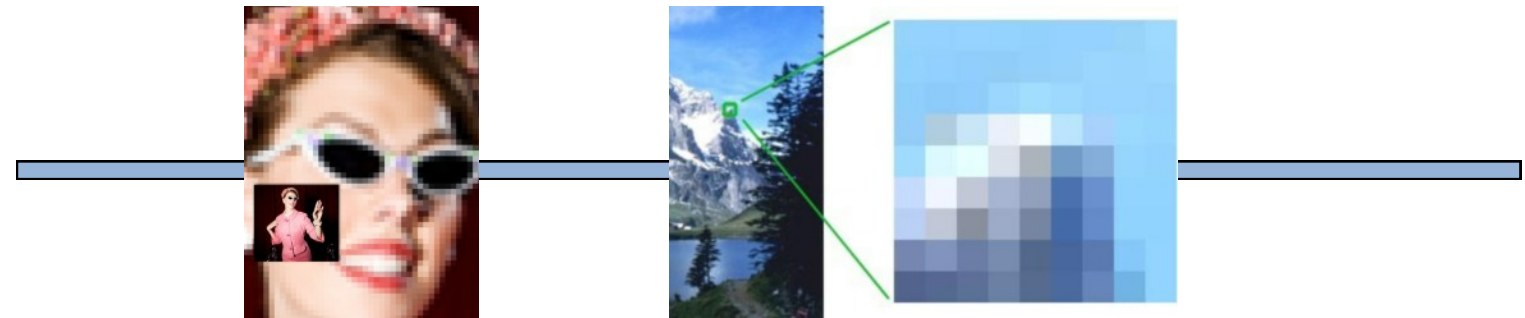
## Vector

Made up of individual scalable objects, which are defined by mathematical equations, which allows them to render at the highest quality. Objects may consist of lines, curves and shapes with editable attributes such as colour, fill and outline. An object can be modified by shaping and transforming using nodes and handles.



## Bitmap

Also known as raster images. Made up of pixels in a grid. Each pixel contains specific colour information. A pixel is minutely small, a single image may be composed of thousands of individual pixels. These pixels are only clearly and individually visible when the image is magnified



**Two** advantages a Vector image has in comparison to a Bitmap image.

Vector images can be scaled, skewed, stretched without losing their quality. A Vector image can also be manipulated without losing its quality. The same can not be said of Bitmap, which, when scaled will lose its original map of bits.

## Vector image:

- Scalable.
- Has no background.
- Resolution independent.
- Unsuitable for photo realistic images.

## Bitmap image:

- Restricted to rectangle.
- Quality is reduced when resized.
- Made up of pixels in a grid.

