Desktop Publishing & Graphic Design
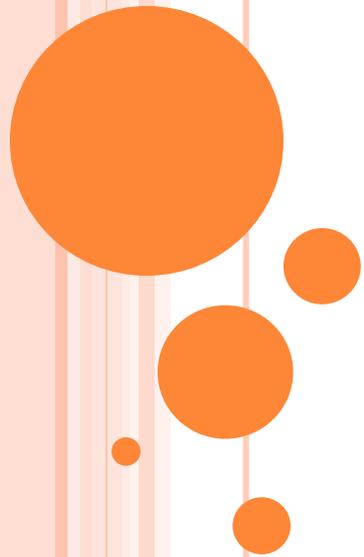
Contents and Unit Information

CONTENTS	

Throughout this unit, you will learn about desktop publishing and graphic design. This unit of work will prepare you for the end of unit assessment task which will be kept as evidence to support your overall 2D assessment unit.
The list below also indicates which topics could feature in your final examination.

Topic Area	
Techniques used for producing effective promotional documents and publications	Knowledge, understanding, recognition and interpretation of the application of techniques used in the production of promotional documents including: colour theory (warm, cool, contrast, harmony, accent, advancing and receding), design elements; line, shape, texture, value, mass/weight, alignment, balance, contrast, design principles; depth, dominance, emphasis, proportion, rhythm, unity/proximity, white space and grid structure. 3D rendering techniques including: light source, materials, reflection, shade and sited environment.
Using technology in graphic communication	Knowledge and understanding of ranges, features and uses of graphic hardware and software computer systems and networks, file management, cloud computing, cloud storage and digital rights management; digital input and output devices and the advantages and limitations of computer-aided design.
Desktop publishing	Knowledge, understanding, recognition and interpretation of generic desktop publishing terms and techniques including: copy/paste, text box, handles, colour fill, colour picking, textured fills, gradient fill, margin, single and multi-page format, title, extended text, alignment, page size, orientation, drop caps, line-spacing,, heading, cropping (square and full cropping), text wrap, flow text along a path, bleed, pull quote, transparency, drop shadow, rotate, justification, paper sizing, reverse, column, gutter, caption, header and footer and folio. Grid, guides, snap, master page layers, serif and sans serif, font styles, column rule/rule, indent, hanging indent, running headline, import/export. Planning strategies, thumbnails, visuals and annotation, proofs (pre-press), register marks, crop marks, run off. Knowledge and understanding of file types: Raster (tiff, jpg, png, bmp), vector (svg, dxf), including their advantages and disadvantages.

Promotional Graphics

Promotional Graphics are used extensively by the sales and marketing departments of companies. They are used to advertise, promote and display products or businesses within the market place and usually take the form of Computer Aided Graphics (CAG) illustrations and promotional publications such as brochures, booklets and posters.

Promotional documents often include an illustration with text and background. The layout is carefully planned to create visual impact and is designed to appeal to a specific target market.

Promotional Graphics usually come in 2 forms:

Promotional Illustrations
Rendered CAD models

Promotional Publications
Brochures, Posters,
Leaflets etc

ADVANTAGES –

➢They can appear 'less technical' than production drawings

➢They tend to be more easily understood than production drawings

➢They can be made to look more realistic than production drawings

➢They can be used in promotional documents or videos

➢They show the customer what the product or building will look like

➢They may be placed into a virtual environment to enhance realism

➢They can have materials and lights applied to create visual impact

➢They can be animated to create visual appeal

➢They can be styled to appeal to a specific target market

➢They can be made to look attractive in order to help sell the product.

DISADVANTAGES –

➢They require skill and knowledge to produce

➢They can give a false impression of the product

➢You cant physically handle a rendered model

Preliminary Stages of DTP

Before a graphic designer would start on a publication, they would produce a range of preliminary sketches to help them create and develop their ideas. The sketches are quickly produced through rough sketches and annotations to note down the designers thought process. This will allow the publication to evolve naturally. At this stage, there may be insufficient detail or information regarding content, images of typeface and colours may not be an accurate representation of the final graphic. Therefore, these sketches would not be shown to the client until more rigorous designs were produced and the designer is happy to share them.

The different type of preliminary sketches are shown below:

THUMBNAILS

Thumbnail sketches are quick, first drafts of possible DTP layouts. The main focus is to help plan out the structure of the publication, eg, how many columns, position of titles and images etc. Other design elements and principles can be considered at this stage, eg, shape, colour and contrast.

WORKING ROUGHS

At this stage, a graphic designer would **develop** a small number of the thumbnails, spending more time on each layout and ensuring more detail in included. The working roughs would be larger than the thumbnails to allow more information to be recorded, eg, possible headings, subheadings, fonts captions etc.
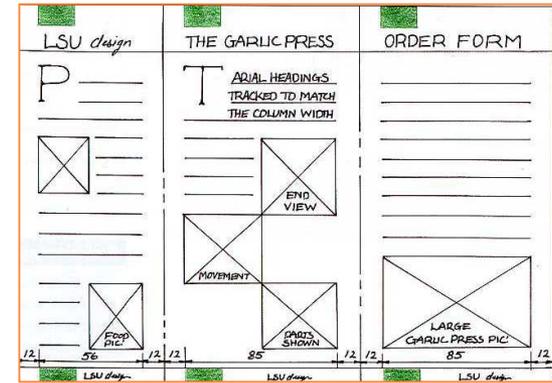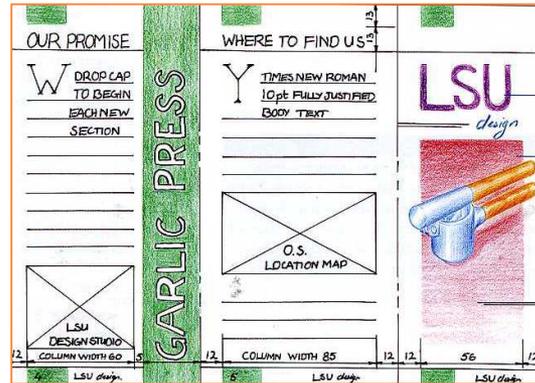
PRESENTATION VISUALS / PROOFS

Presentation visuals are full scale representations of the chosen design for a presentation.

Traditionally, presentation visuals would have been manually produced on a drawing board to show the scale, layout, fonts and colour choices intended for the document. This process has now been taken over electronically with visuals being produced as **PROOFS** on DTP or illustration software.

Advantages:

➤ It gives the graphic designer a preliminary version of the design to discuss with their clients.

➤ Feedback from the client will allow the designer to make modifications quickly and easily to the design prior to production.

➤ Electronic versions of the publication can be sent via email so feedback can be sought quicker.

➤ Dimensional information relating to the main features within the publication will be stored on the computer and can be updated when required. Font styles and exact images should also be decided at this stage.

The presentation visuals above show the sizes and details to be included on the final document.

The final presentations should closely reflect what is shown in the presentation visuals/proofs. Some of the images have chanced positions slightly, this may have resulted from the discussion between the designer and the client.

Desktop Publishing Techniques

PAGE LAYOUT

PAGE ORIENTATION

PORTRAIT – a page layout function which arranges the page so that its widest side is vertical.

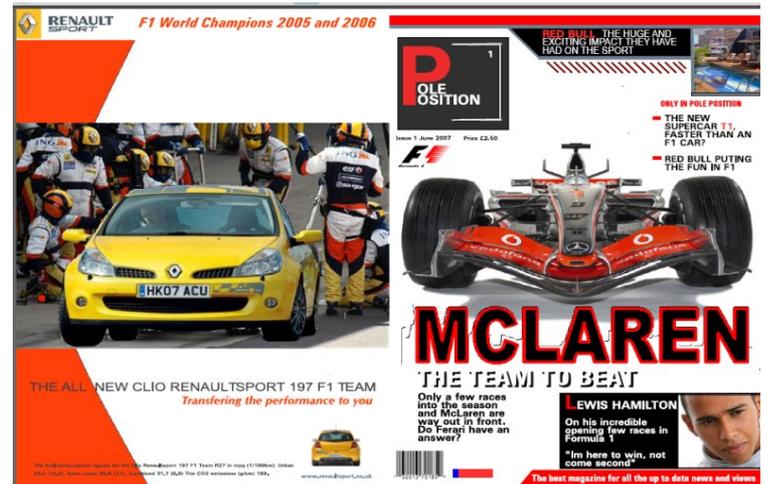**LANDSCAPE** – a page layout function which arranges the page so that its widest side is horizontal

SINGLE PAGE – Output printed on one single piece of paper

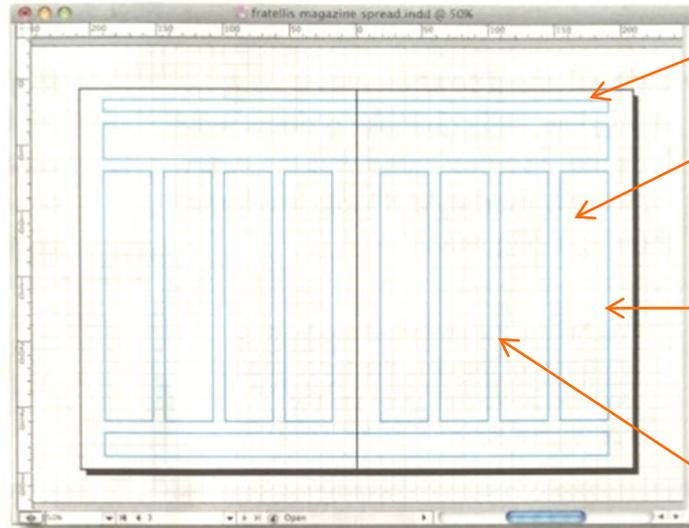**CENTRE SPREAD** – The pair of pages that come at the centre of a folded section

DOUBLE SPREAD or FACING PAGES– Images and text which is designed to be printed over two facing pages.

Desktop Publishing Techniques

PAGE LAYOUT

MASTER PAGE – In a publication such as a newspaper or magazine, the final appearance of each page may look different. However, it is likely that the starting grid structure or layout has been formed on a master page. This will ensure that common features such as margins, columns, gutters, header and footer spacing remain constant throughout the entire publication.

**LAYOUT GRID - **The layout grid remains flexible on the master page template. This allows the graphic designer to alter the position of images, heading and subheadings etc to make the presentation more unique and appealing to the target market.

FOREDGE (MARGIN) – the margin of a page which is on the side of the publication which opens (i.e. the side of the page which is not bound or folded)

HEADER SPACE

COLUMN – a vertical area of the page usually filled with text.

COLUMN GUIDES – non-printing guides showing margins and columns.

GUTTER – spacing between columns and the extra white space at the centre of facing pages to allow for folding and binding
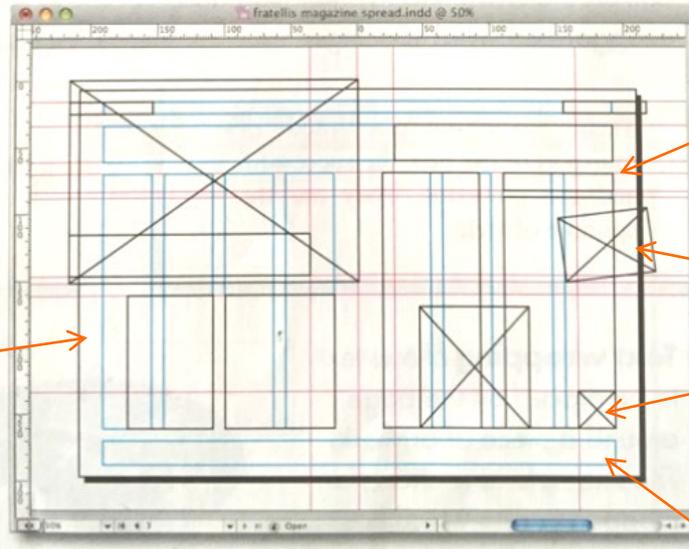
MARGIN – Space between the edge of the printed paper and the text or drawings on it.

ROTATED IMAGES – These add an informal feel to the presentation

IMAGES – These are represented by a rectangle with a cross though the centre.

FOOTER SPACE

# Desktop Publishing Techniques

PAGE LAYOUT

FOOTER – A line of text placed at the bottom of the page which is repeated throughout the document. For example, a web address or issue number.
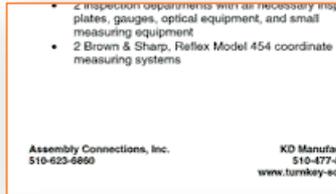
FOLIO - The page number

FOOTNOTE - Text placed at the bottom of a page prefixed by a superscript number which is cross-referenced by the same character in the text. Footnotes are used to provide additional information.
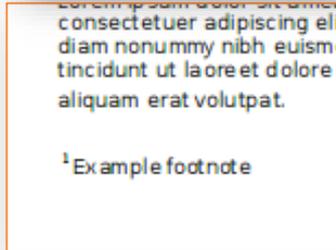
LAYERS -

Layers give the graphic designer more control over the page layout. Headers and footers may be stored on one layer and the body text on another. The use of layers is especially useful in an international market where different languages can be stored on separate layers and added to different versions as required.
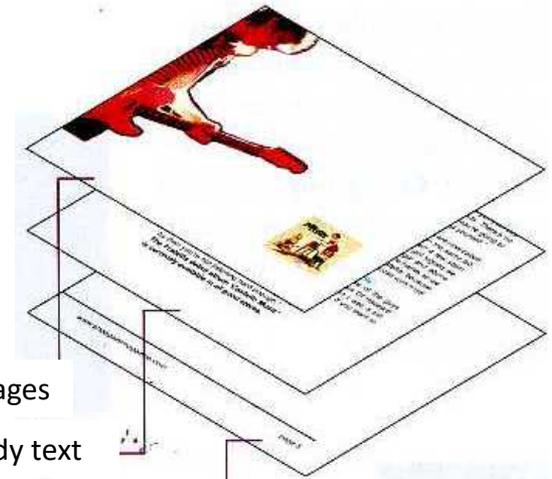
Layer 3 – Images

Layer 2 – Body text

Layer 1 – Header/footer

Desktop Publishing Techniques

Header
In this example a **running header** is shown, so called because it appears on every page in this section of the publication.

Headline
The headline introduces the article and usually appears at the top of the page. Bold fonts and tight tracking are used to create emphasis. The reverse text on a blue colour fill gives this snappy title visual impact and helps draw the reader into the article.
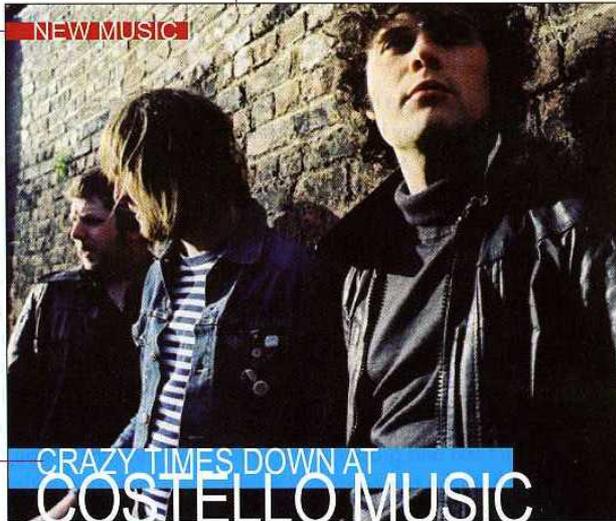
Drop capital
A larger first letter signals the start of the article.

Hanging indent
The body copy has been stepped in away from the text frame, creating more white space.

Column
The body text is arranged in columns to restrict the width of the lines. It makes the text easier to read and helps create a visual structure that sets the tone of the page. Columns are often, but not always, the same width.

Bleed
The main picture bleeds off the page at the top and left edge. This creates a modern, informal feel to the page.

Colour fill
Text boxes can be filled with colour to create harmony or contrast. The two plain blue fills used here harmonise with the blues in the main picture and contrast with the reds used elsewhere.

Column rule
The column rule sharpens the lines on the page, giving the layout a more formal look. In this case it also separates the main article from the interview with the lead singer.

Reverse
The colour of the body text is black. The colour of text in this sub-heading has been reversed and set on a darker colour fill. The reverse creates contrast and gives the page visual interest.

Heading
This second heading introduces a separate part of the article.

Tilt
The picture is tilted a little to catch the reader's attention and to create an informal modern feel that appeals to the youthful target market.

Caption
Gives additional information about the photograph.

Sub-headings
Sub-headings break up a large block of body copy and create a visual rhythm on the page.

Page number (folio)
Page numbers normally appear in the footer.

Footer
The footer can contain a variety of information. It is not normally relevant to the article but to the publication itself.

Pull quote
This is selected body copy, enlarged and emboldened or coloured. It draws the reader into the article and is often a controversial or lively quote. The oval shape creates contrast with the box shapes on the page.

Gutter (alley)
This narrow space separates columns. It contributes white space to a layout and helps to de-clutter a page.

Cropped image
The image has had the background removed. This creates a more interesting shape.

Text wrap
The text wraps, or flows, around the cropped image. It brings an informal modern feel to the page.

Desktop Publishing Techniques

TYPEFACE

FONTS AND TEXT SIZE -

The heading should be the most visible piece of text on any page, followed by the sub heading then the main body text. You can make a heading stand out by using some of the following techniques:

➢ By increasing the size of text,

➢ Through colour choice

➢ Making it bold

➢ Through the font selection

Fonts can be defined as Serif, sans serif, script or novelty.

Serif

SERIF fonts are based on an old typeface which gives it a more traditional look. Serifs are the flicks that appear at the beginning and end of letters which make the words easier to follow.

San serif

**SAN SERIFS** have no flicks or decoration. They are more minimalistic which provides a clean, simple and a modern feel.

Script

SCRIPT fonts are elaborate and decorative styles that are designed to imitate handwriting. Script style can be formal, feminine, fun and youthful.

Novelty

NOVELTY fonts are used to bring impact and humour to a document. It is normally used to target a younger market or audience.
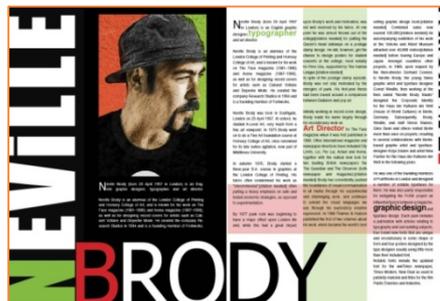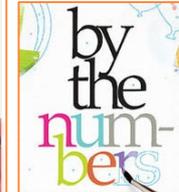
Desktop Publishing Techniques

TEXT FORMATTING

ALIGNMENT - Positions of text lines on a page or column e.g. aligned right, aligned left, centred or fully justified.

Aligned left

The musical adaption of Finding Neverland is to close on Broadway, producer Harvey Weinstein has confirmed. The show will be performed in New York for the final time in August, 18 months after it opened.
A national tour followed by a run in London's West End will still go ahead as planned. Weinstein also announced that a film version of the stage musical will be produced. Finding Neverland originally started life as a non-musical film starring Johnny Depp. It was released in 2004 by Miramax, the company co-founded by Weinstein.

Aligned right

The musical adaption of Finding Neverland is to close on Broadway, producer Harvey Weinstein has confirmed. The show will be performed in New York for the final time in August, 18 months after it opened.
A national tour followed by a run in London's West End will still go ahead as planned. Weinstein also announced that a film version of the stage musical will be produced. Finding Neverland originally started life as a non-musical film starring Johnny Depp. It was released in 2004 by Miramax, the company co-founded by Weinstein.

Centred

The musical adaption of Finding Neverland is to close on Broadway, producer Harvey Weinstein has confirmed. The show will be performed in New York for the final time in August, 18 months after it opened.
A national tour followed by a run in London's West End will still go ahead as planned. Weinstein also announced that a film version of the stage musical will be produced. Finding Neverland originally started life as a non-musical film starring Johnny Depp. It was released in 2004 by Miramax, the company co-founded by Weinstein.

Justified

The musical adaption of Finding Neverland is to close on Broadway, producer Harvey Weinstein has confirmed. The show will be performed in New York for the final time in August, 18 months after it opened.
A national tour followed by a run in London's West End will still go ahead as planned. Weinstein also announced that a film version of the stage musical will be produced. Finding Neverland originally started life as a non-musical film starring Johnny Depp. It was released in 2004 by Miramax, the company co-founded by Weinstein.

INDENT – beginning a line of text further in from the left margin then the rest of the text. This helps to create a visual start point.

The musical adaption of Finding Neverland is to close on Broadway, producer Harvey Weinstein has confirmed. The show will be performed in New York for the final time in August, 18 months after it opened.

DROP CAPITAL – Signifies the start of an article by indenting an oversized capital letter into the column of text.

The musical adaption of Finding Neverland is to close on Broadway, producer Harvey Weinstein has confirmed. The show will be performed in New York for the final time in August, 18 months after it opened.

HANGING INDENT – Uses a drop capital but indents the column of text underneath it.

The musical adaption of Finding Neverland is to close on Broadway, producer Harvey Weinstein has confirmed. The show will be performed in New York for the final time in August, 18 months after it opened.

JUSTIFICATION – This format creates clean vertical lines on both sides of the column. It gives a strong visual shape but can sometimes give unwanted exaggerated word spacing.

TEXT FORMATTING

TEXT WRAPPING – Text is wrapped around an image/graphic to make the presentation look more visually appealing. This can add emphasis to the image as it helps it stand out or can help to create a visual connection known as unity.

WHITE SPACE – Areas of empty space on a page (which does not have to be white). When used effectively it aids comprehension by complementing and setting off graphic images.

TEXT FLOW ALONG A PATH – Text can be made to follow along an irregular line called a path. This can add contrast to a rectangular or linear presentation, create unity between an object and the text or suggest movement on the page.

PULL QUOTES – A quote, which is featured in the body text, that has been enlarged and used on its own to help draw in the viewer and encourage them to read the full article.

CAPTION – This is the descriptive text which accompanies a graphic or illustration to give additional information.

REVERSE – White text on a coloured background. Contrast allows the text to be read.

DROP SHADOW – When a shadow is placed behind text (or an object) to give depth and allow it to stand out.

Desktop Publishing Techniques

ILLUSTRATION TOOLS

SHAPE –

Many publications require original artwork, eg, the jagged abstract shape behind the car in the page shown opposite. This detail would have been created using one of the many drawing tools located within any DTP software. The standard shapes menu within Serif is shown on the right hand side. Each shape can be edited and manipulated to create a unique outcome.

COLOUR FILLS –

Colour fills provide background colours, textures and fill effects to enhance publication

Solid Fill   **Gradient Fill**   **Textured Fill**

COLOUR PICKER–

This tool allows you to select the exact colour from an image and use it else where in the presentation to create unity.

TRANSPARENCY EFFECTS -

This tools allows you to alter the transparency of an object or image, ie, make it see through. A gradient or textured transparency effect can be used as well as a solid effect.

CROPPED IMAGES -

Many photos or images may contain a lot of unwanted background. We can remove this unwanted area by using the **crop** tool. This will reduce the background area and allow the main focus of the image to be more visible.

CROP TOOL

BEFORE CROPPING

AFTER CROPPING
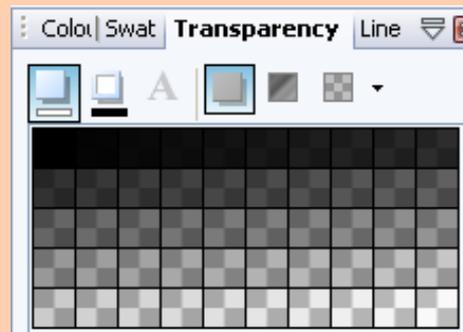
IRREGULAR CROP -

Sometimes, a graphic designer would want the background to be removed completely. This can be done easily by using Serifs '**Cutout Studio**'. This tool allows you to remove large areas of the background by following the contours of the main image.

BEFORE CROPPING

AFTER CROPPING

'Cut out' Studio in menu

Desktop Publishing Techniques

PREPARING FOR PRINT

The printing process for a publication, such the magazine shown opposite, is initially printed on oversized paper and trimmed down to the final page size. This allows images to be printed right to the edge of the page - known as a bleed effect.

CROP MARKS - These indicate where the publication should be trimmed to.

REGISTRATION MARKS – Coloured prints are produced using a combination of 4 layers; cyan, magenta, yellow and key (black). A printed plate is made for each colour then printed one on top of the other to form the final image. The registration marks are used to ensure the plates are aligned accurately.

GREY SCALE TEST   PRINTING PAGE   COLOUR TEST

BLEED

REGISTRATION MARKS

CROP MARKS

PRINTING AREA   FINAL PAGE SIZE   NON PRINTING AREA
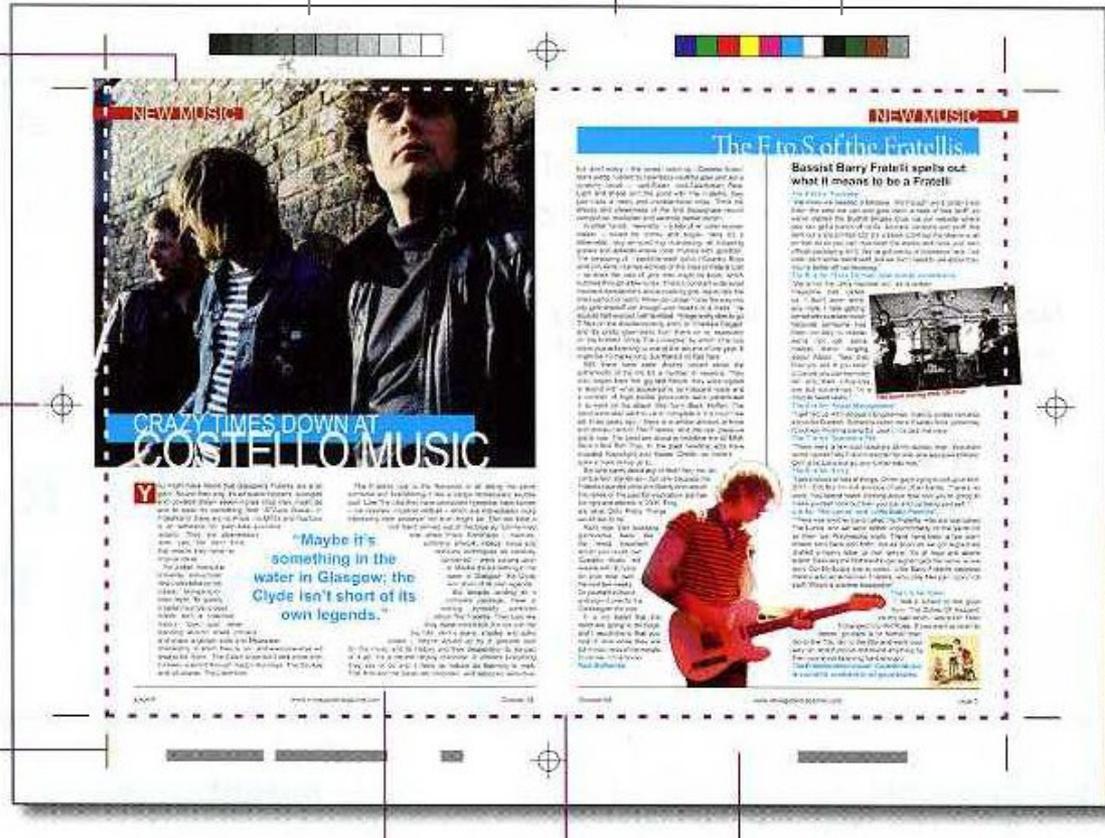
Task 1

A thumbnail graphic is shown opposite.

a. Thumbnails are used extensively by graphic designers to explore and develop ideas. **State** <u>two</u> reasons why thumbnails are not appropriate to communicate ideas with a client. (2)

....

....

Require image of bridge, showing the detail of the stonework

Square cropped grey scale image

Heading – reverse text
The title text should be a stylised, sans-serif font

Require image of bridge – preferably with city in background

Grey scale image – full size of page

Key facts about the bridge will go in the colour fill box

Drop cap to attract readers to the beginning of the article

2 column structure, 10pt serif font

Colour fill in box to help contrast against background

b. "Drop caps" have been applied at the beginning of the body text on each page of the draft layout shown right. **Describe** a problem that the reader may experience with this approach. (1)

....

....

c. **Explain** the issue the graphic designer could face when adding reverse text upon a greyscale image. (1)

....

....

d. Part of the layout is shown to the left. **Describe**, with reference to the part layout, how the graphic designer has made use of the following terms.

(i) Justification .... (1)

(ii) Alignment .... (1)

(iii) Gutter .... (1)

(iv) Transparency .... (1)
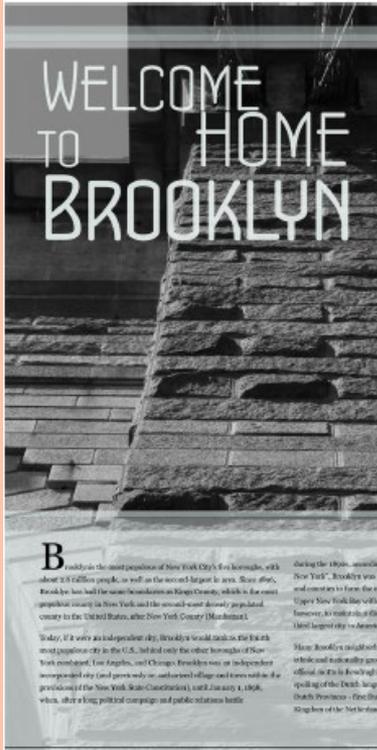
Design Elements and Principles

Introduction

The purpose of graphic design is to create documents and publications that have visual impact and can hold the viewers attention.
To do this successfully, graphic designers need to use a combination of **design elements** and **design principles**.
The design elements can be thought of as the basic things that make up a publication. Whereas, design principles focus on how the elements are used and assembled on the page.

Line
Different tools make different kinds of lines.

Shape
Shapes come in many types and sizes.

Color
Every color can be bright, dull, dark, or light.

Value
Value refers to dark and light in painting or drawing.

Form
Form is three-dimensional, and takes up space.
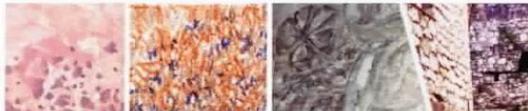
Texture
Texture is how a surface of something feels or looks.

Space
We use illusions to make space in art.

Balance
Balance is the comfortable arrangement of things in art.

Contrast
Contrast is the difference between elements in an artwork.

Emphasis
Emphasis is the creation of a focal area in a work of art.

Movement
Movement is how we get around in a work of art.

Pattern
Pattern decorates surfaces with planned, repeated units.

Rhythm
Rhythm is the repetition of shapes, lines, and forms.

Unity
Unity means that all is in harmony. Variety adds interest.

Design Elements

ALIGNMENT

Good alignment helps to improve the structure of the layout. It makes a page feel organised and easy to follow. It also contributes to neatness and sharpness.

A POOR EXAMPLE OF ALIGNMENT

When you assess the structure of the page, you will see that there are no clear guidelines. All the parts are unorganised and the document looks untidy.

A STRONG EXAMPLE OF ALIGNMENT

Creating a strong grid structure will allow you to minimise the fuss and keep the presentation looking controlled. The snap function will ensure that the alignment is always accurate.

BALANCE

Balance is essentially the way items are positioned on the layout. A symmetrical balance can offer stability and strength, whereas, an asymmetrical layout can suggest excitement, movement and youthfulness.

SYMMETRICAL - balance is seen in perfectly centered compositions or those with mirror images.

ASYMMETRICAL - Not having planes which divide the structure into mirror- image halves.

RULE OF THIRDS – Focal points are created when the page is divided into thirds as shown opposite. These impact points are the key areas to locate important features.
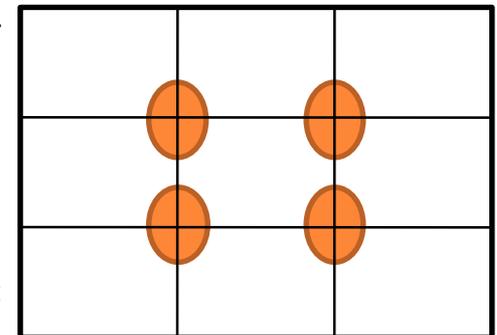
Design Elements

LINE

Lines play an important part in the design of a presentation and can be used in a variety of ways to help improve it.

Lines can;
- be used to separate parts of a layout.
- connect parts of the layout by linking pieces of information together.
- create emphasis by underlining features.
- help to organise information by establishing columns of text or defining the boundaries of your page.
- direct the readers' eye around the presentation.
- convey a mood or an emotion.
- create rhythm and movement using wavy or zig zag lines.
- create a texture.

This layout add two horizontal lines to the bland design shown at the bottom right of the page.
These lines bring a number of benefits to the layout:

- They pass through and link both sides of the layout
- The top line underlines and emphasises the product name
- The bottom line passes behind the memory stick, creating depth: It pushes the memory stick forwards
- The lower line separates the space at the foot for the slogan
- Positioning the lines at the top and bottom of the layout connects the 2 areas, creating unity
- The lines are positioned carefully to create strong alignment. This helps to organise and give structure to the layout

This layout is nicely proportioned but lacks focus, unity and impact

The wavy lines link together the heading with the image. It also look less formal.

The lines provide a border guiding the viewers eyes to the central product.

Design Elements

SHAPE

Creative use of shape can help sustain reader interest. Shape can also help organised a layout by separating items and marking the layout easy to follow. Shapes can be categorised as natural, geometric or abstract.

Shapes should not dominate the layout, they should be used to support the message or promote the product and connect with the target market.

The main image has been cropped which introduces a contrast in shape between the irregular shape and the rectangular background fills. This makes it appear less formal. The display is still a little bland as there is no emphasis on the main image.

The layout above makes use of rectangles to frame the images giving a formal, structured and organised result. The layout is a little bland as it lacks contrast and variety.
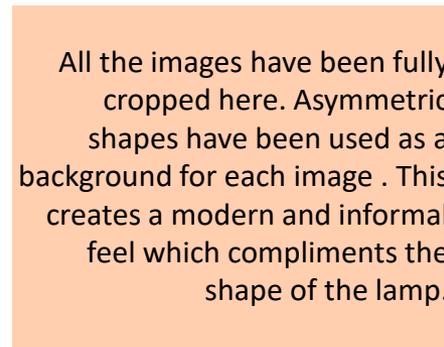
All the images have been fully cropped here. Asymmetric shapes have been used as a background for each image . This creates a modern and informal feel which compliments the shape of the lamp.
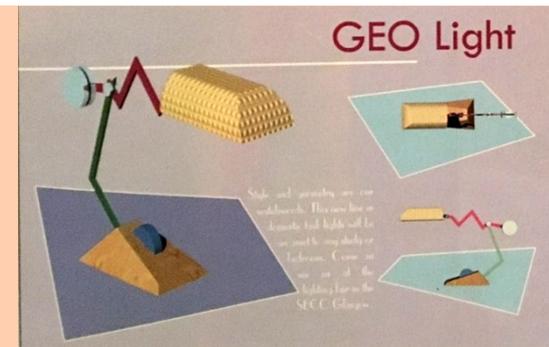
A variety of shapes are used in this layout to add visual interest through contrast. The softer circles and ellipses are repeated to create a sense of unity and rhythm. The large ellipses make the presentation feel informal and much less aggressive.

Design Elements

TEXTURE

Texture can be considered in two ways:

PHYSICAL TEXTURE –
This is provided by the physical feel of the paper; is it smooth like photographic paper of coarse like recycled paper.

VISUAL TEXTURE –
This Is the pattern that is visible in an image such as wooden bark or sand in a photograph.

Both of these textures are used to add clarity and definition to a presentation.

SIZE & PROPORTION

The relationship between items in a graphic layout can be emphasised by size and proportion.

Often the most important item in a layout will be the biggest. This is done to create a dominant focal point. Text can be used in this way with the heading being proportionally bigger than the subheadings and the extended text being smaller again.

Large main image
(links with headline)

Small rotated image
(not linked to main story)

Large heading
(150pt)

Medium subheadings
(35/40pt)

Large headline
(120pt)

Small footer bar
(18pt)

Design Elements

COLOUR

The use of colour is an important part in illustration and graphic design. Colour can be used to:
➢ make a product stand out
➢ Give a layout visual impact
➢ Unify a layout
➢ create certain moods or feelings
➢ attract a particular target market

There are many different effects and moods that can be achieved by using carefully selected colour combinations.

HARMONY - is created when colours close to each other on the outside of the colour wheel are used together. Harmony is easy on the eye and can be used to create a relaxed and elegant ambiance (eg blue and blue-green).

CONTRAST - is created when colours far apart on the colour wheel are used together. Contrast is vibrant, eye catching, bold and exciting (eg blue and orange)

WARM COLOURS - such as reds, orange and yellows all give a sense of heat and warmth. They are also known as **ADVANCING** colours as they appear closer to the viewer than other colours.

COOL COLOURS - such as blues, greens and violets do the exact opposite. They give a feeling of being cold and are also known as **RECEDING** colours as they appear more distant and further away.

WHEN COLOURS DON'T WORK
This colour scheme includes too many colours. They work against each other and overshadow the main product image. The heading and subheading are difficult to read against the multicolour background. There is no harmony, unity and the contrast in conflicting.
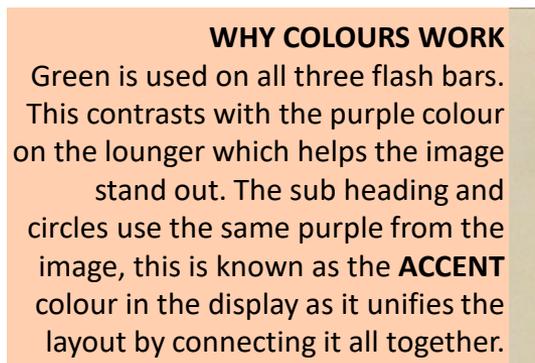
WHY COLOURS WORK
Green is used on all three flash bars. This contrasts with the purple colour on the lounger which helps the image stand out. The sub heading and circles use the same purple from the image, this is known as the **ACCENT** colour in the display as it unifies the layout by connecting it all together.

HOW COLOURS WORK
This display uses the colours that already appear in the lounger image plus one other. The reuse of colour is a good method of creating unity in a layout. The colours compliment each other which links with the target market by supporting the relaxed mood and tone of the display.

Design Elements

CONTRAST

Contrast is about differences and opposites to create visual impact. Contrast isn't just linked to colour choice, it could be visible in a range of formats, eg;

➢ Black and white

➢ Vertical and horizontal

➢ Circle and squares

➢ Large and small

➢ Plain and textured

➢ Serif and san serif

➢ Capital letter and small letters

TEXT
TEXT

A^a

STRONG CONTRAST

➢ The 2D chairs have been scaled down and the 3D image has been scaled up, this creates a contrast in size.

➢ The large size of type used on the title contrasts with the smaller text used elsewhere.

➢ A different typeface is used on the title compared to the rest of the text.

➢ The background colour creates contrast with the blue in the chair.

➢ The vertical colour fill and text contrast with the horizontal items.

➢ A circle is added to contrast with rectangles.

LACK OF CONTRAST

➢ The chair images are all the same size.

➢ The fonts are the same typeface and size.

➢ The colours harmonise.

➢ Nothing stands out/is eye catching

➢ While the alignment is strong, it lacks visual impact.

Design Elements

VALUE

Value deals with the use of colour tones in a layout. Darker tones have a higher value. Setting dark tones against light tones create contrast and makes a display more dramatic.

MASS/WEIGHT

Mass is defined by coverage area with no definite shape. All items in a layout have mass as the item sits on the display and covers an area. A bold heading has a greater mass than a small subheading. Blocks of text, lines and colour fills also have mass. Thin lines with a small mass can bring a formal elegance to a layout while heavy blocks of colour with a large mass can represent fun and frivolity.

In this display, the headline, headings and subheadings are all bold and chunky, ie, they have a large mass. This helps target a younger target audience because it looks fun, friendly and appealing.

WHITE SPACE

White space occurs when areas on the presentation are left blank. This allows the eyes to rest and stops the presentation looking busy and cluttered. Wide areas of head space, foot space and margins help to create focus by directing the readers eye to the text or main image.

It is important to note that white space does not have to be white – it's simply just space free from text or graphics. Look at the Audi advert above, the black unpopulated area around the heading is an effective example of white space being used to emphasis the text.

In this display, the heading has a reasonably large mass to help it stand out. However, the rest of the text has a low mass which supports the sophisticated target market as it is subtle, delicate and modern looking.

Design Principles

DOMINANCE AND EMPHASIS

Graphic layouts are often scanner quickly by the reader. If the layout is bland or without a focal point it may not hold the reader attention. There will be items in your layout that will require more emphasis than other items, such as headings and subheadings. These items can be made to dominate the page by making the fonts bigger, bolder, underlined or by displaying them against a different background.

DOMINANCE occurs when one item stands out more than others. In other words, it dominates the layout.

EMPHASIS is when an item is made more eye-catching

POOR EXAMPLE

➢ This layout has been aligned carefully but lacks visual impact
➢ The space is filled but there is no visual impact
➢ The images are too similar in size and are spread out around the layout
➢ The product name does its job but lacks impact
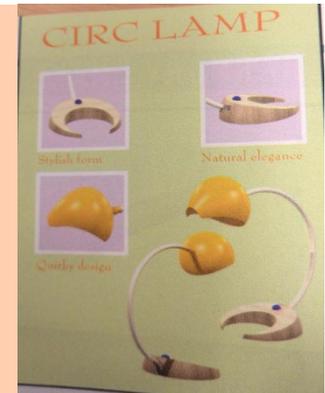
STRONG EXAMPLE

➢ Creating a focal point by enlarging an image and positioning it carefully
➢ Grouping smaller images and scaling them down to make the focal point more dominant
➢ Change the font to create contrast
➢ Use an underline to add emphasis
➢ Leaving white space around the product name to emphasise it
➢ Reducing the number of colours to add contrast: the background colour pushes the images forward

This layout now has a dominant focal point (Image) , an emphasised product name (Heading), a structured layout and a simple but effective colour scheme. **It now has VISUAL IMPACT**

Design Principles

DEPTH

Creating the illusion of depth in a 2D page is an important way to give a layout visual impact Some of the methods of how depth can be created are shown below;
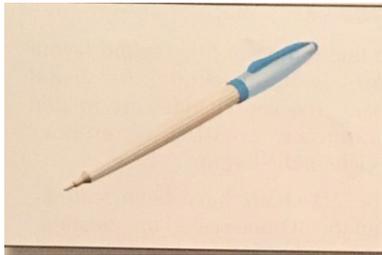
Using pictorial views gives the object a 3D appearance.

By placing a line behind the object so it cuts through the box provides depth

Placing a colour fill or flash bar behind the object gives it its own background.

Placing text behind the object gives the illusion that the model is overlapping the text therefore creating depth.

Adding a drop shadow behind the object creates a sense that the object is sitting on the paper.

By using differences in scale (large images and smaller images) creates depth as it looks like the smaller ones are further away.

Placing other images behind the main image can create depth.
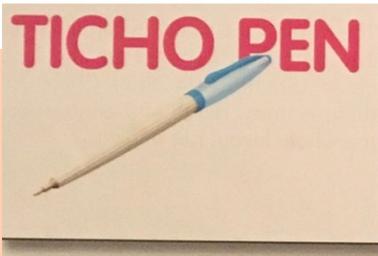
Here is a combination of techniques used to create depth.

25

Design Principles

UNITY & PROXIMITY

Layouts are often made up of many different parts or items. It is important that these parts are connected together in some way so that they appear to be part of the same layout. This is known as **UNITY**. There are many ways to achieve unity:

➢ Overlapping an image can create unity- It makes physical connection between the text and the image

➢ Lines can do the same – Placing the lines behind the image connects and unifies the combination

➢ Using a colour fill behind 2 items can connect them. The text and the torch are connected by the blue flash bar

➢ Repeating colours in different parts of the layout (repetition) can tie items together

➢ Repeating features in separate positions can create unity

➢ Using harmonious colours can have a unifying effect (the colours in the torch are used elsewhere in the layout)

➢ Positioning items close to other items can create unity

Careful positioning of related items in close **PROXIMITY** can make a publication easier to follow, eg, a caption next to the related image.

We can identify who the exclusive interview is with because the text/red flash bar is in close **proximity** to the sub heading about Muse.
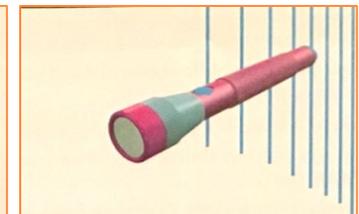
Design Principles

RHYTHM AND FLOW

RHYTHM is one method of creating the feeling of movement by repeating elements. A graphic designer uses layout to help the text and graphics **FLOW**. This helps direct the reader through the display making it easier to follow.

We are conditioned to read from top left to bottom right. A magazine cover normally has the title at the top and a photograph in the middle and contents list down the side or along the bottom. The layout makes use of emphasis and flow to grab the reader's attention and guide them through the different parts of the display.
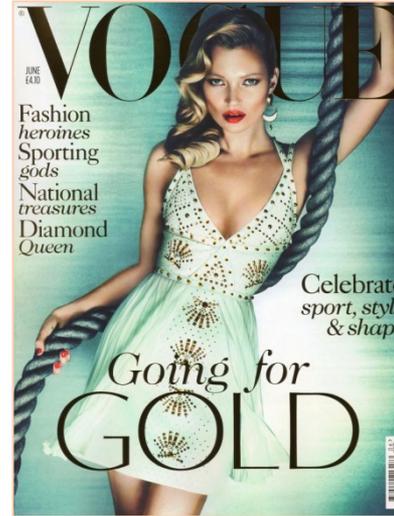
Flow is created in this display by the positioning of the sub headings around the image, starting from top right down and across to the text bottom left.

Rhythm is created as each paragraph starts with a bold drop capital followed by the body text. The drop capitals are in alphabetical order which creates flow – this guides the viewer automatically on to the next area of text.

Rhythm is created here as a result of the repeated pattern in the text formatting;

RED TITLE (Year)
Standard body text

EXAMPLE

White space

White space doesn't have to be white. The large expanse of black around the title focuses the eye there and creates an impression of drama and sophistication. The white space to the top right helps balance the layout and emphasises the photographs below. Both white spaces allow the eye to rest and make the layout less busy and more luxurious. This impression is important to the magazine's target market.

Visual unity

Visual unity is achieved through the use of green. It appears in the title, in sub-headings and in the eye makeup on some of the photographs. The reader sub-consciously connects these features through colour. Overlapping pictures also creates unity and adds depth to the layout.

Contrast (shapes)

Shapes here are mainly square but the close up shots of female faces are curved and contoured, creating **contrast**. The columns of body text are left aligned and leave an uneven edge on the right to break up the square elements on the page.

Contrast (fonts)

The title is a serif font and the body font is sans serif (see page 184), creating **contrast**.

Use of line

The use of **line** emphasises the clean vertical lines in the layout. It also provides an opportunity to introduce the pink accent colour.

Visual unity

The start of the article is **emphasised** by the title while the drop capital **tells** readers where to start reading.

Contrast (tone/colour)

Contrast is applied here through lightly toned pictures and a very dark background. Pink and green also add eye-catching contrast.

Contrast (layout)

The cluster of photographs in the bottom right creates **contrast** with the neat, organised layout on the rest of the page.

Colour

Colour is important here. The subtle pastel tones of the faces contrasts with the severe black background. Pink appears in other parts of the layout and creates a strong contrast with the green text.

Alignment

Alignment is crucial to this clean sharp layout. The paragraphs on the right-hand page are accurately aligned to create a crisp vertical line and the photo and text on the left-hand page are accurately aligned and neat.

Rhythm and flow

Rhythm is created by the green sub-headings and by spacing between paragraphs. Both techniques create a visual **flow** that leads the reader through the layout.

Task 2

a. **State** two instances where the graphic designer has created depth to add interest in the magazine layout. (2)

....

....

....

b. **State** an example of emphasis in the layout and explain the effect created. (2)

....

....

....

c. The graphic designer has made use of value in the magazine layout. **State** where value has been used in the layout **and explain the effect it** has. (2)

....

....

....

d. Describe how the graphic designer has created an informal and interesting look to the magazine layout. (2)

....

....

....
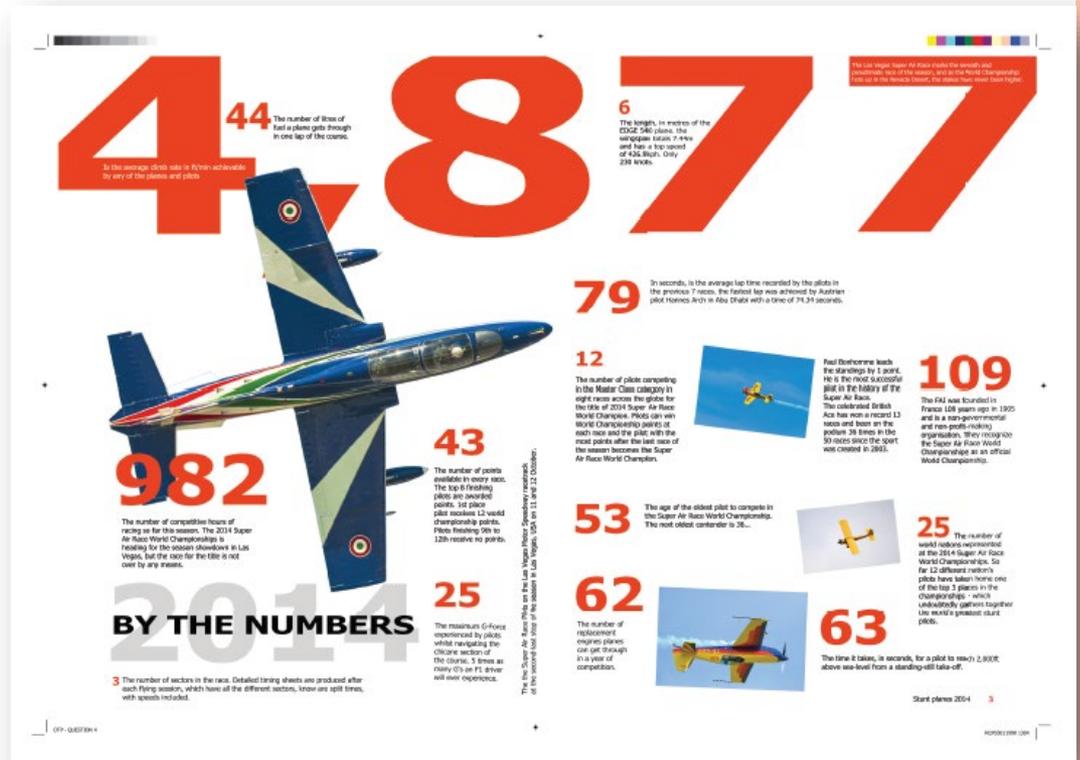
e. **State** where rhythm has been used in the magazine layout. (1)

....

....

f. Throughout the magazine layout, the graphic designer has made use of varied proportion. **Explain** what effect the use of varied proportion has on the magazine layout. (2)

....

....

....

Image and File Types

RASTER / BITMAP

Raster (bitmap) images are made of pixels. A pixel is a single point or the smallest single element in a display device.

When you take a photograph using a digital camera or scan an image from a magazine, you are creating a raster (bitmap) graphic.
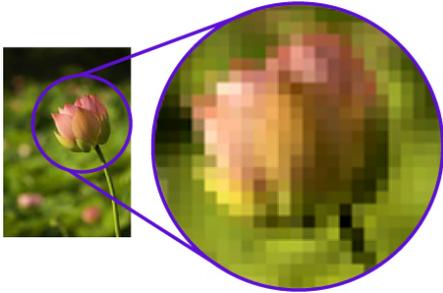
Most Common raster/ bitmap files are:

- BMP - BitMap
- JPEG - Joint Photographic Experts Group
- GIF - Graphics Interchange Format
- TIFF - Tagged Image File Format
- PNG - Portable Network Graphics
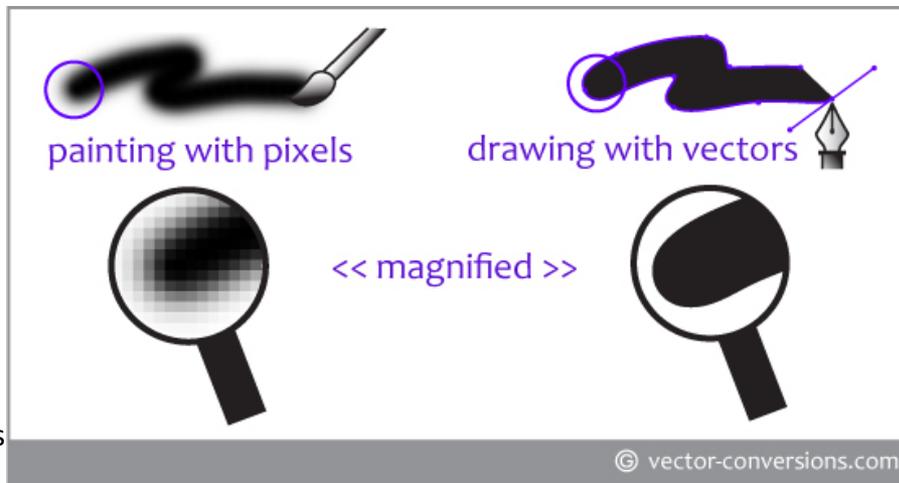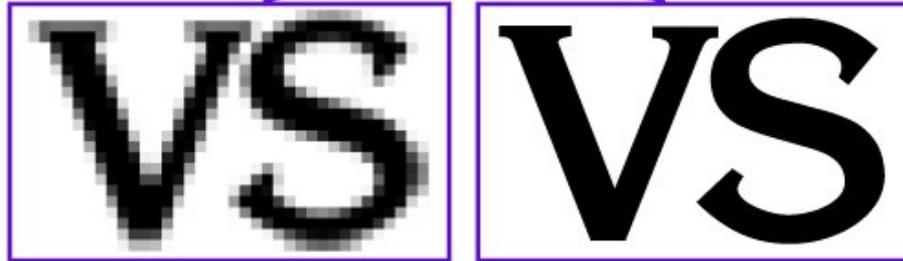
VECTOR

Vector images are mathematical calculations from one point to another that form geometrical shapes.

Vector graphics are scalable - ie when you resize them, they do not lose quality.
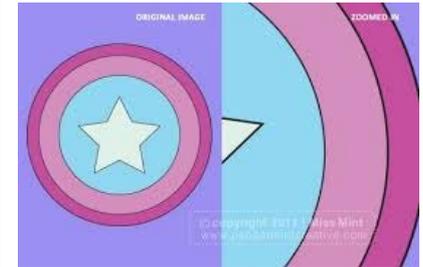
Most Common vector files are:

- CMG – Computer Graphic Metafile
- SVG -Scalable Vector Graphics
- ODG – Open Document
- EPS - Encapsulated PostScript
- DXF - drawing exchange format

Raster vs Vector

painting with pixels   drawing with vectors

<< magnified >>

© vector-conversions.com

30

Image and File Types

RASTER / BITMAP

ADVANTAGES

An image which is made up of tiny squares of colour. The arrangement of these tiny coloured squares produce the effect of an image. This is a good method of reproducing 'continuous tone' images, such as photographs.
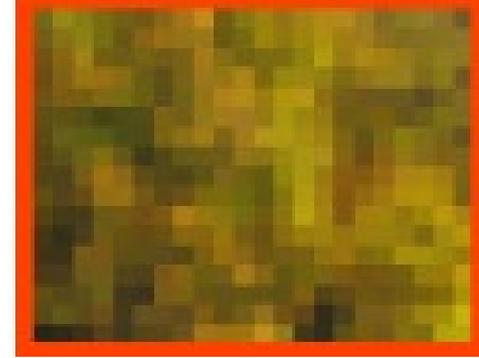
DISADVANTAGES

- Images cannot be scaled up without losing quality.
  Why? Because it Is bound by the number of pixels in the image.
- Large dimensions & detailed images equal large file size.
- Some service providers like engravers, stencil-cut signs, etc, must have vector art.
- It is more difficult to print raster images using a limited amount of spot colours.
- Depending on the complexity of the image, conversion to vector may be time consuming.
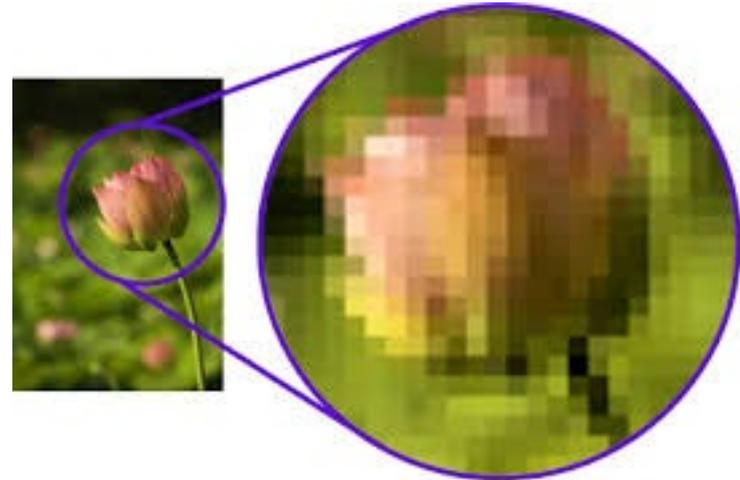
Image and File Types

VECTOR

ADVANTAGES
- These <u>can</u> be scaled up without losing quality.
- *Why? Because they are made of mathematical calculations that form objects and lines.*
- a small file size
- They are ideal for logo designs, as they can be printed very small on business cards or printed large on a billboard poster.
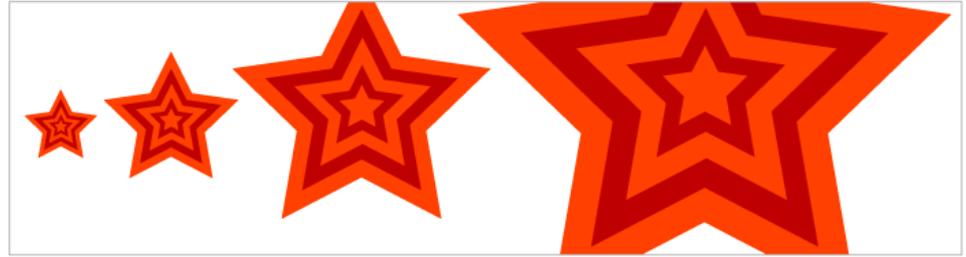
DISADVANTAGES
It is not the best format for photographs or photo-like elements with blends of colour.

Vector image   Raster image
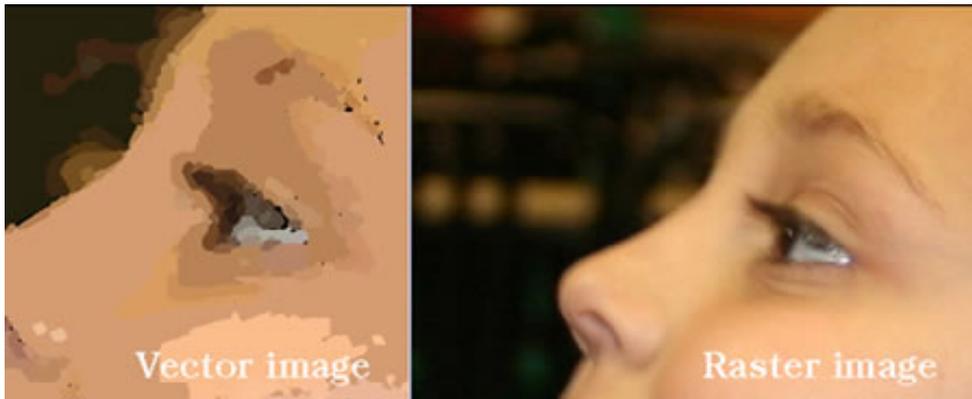
Using technology in DTP

HARDWARE AND SOFTWARE

Computer systems use a combination of hardware and software to perform tasks. **Hardware** is the name given to the physical part of the system, both internal (CPU, RAM etc) and external (keyboard, monitor etc). **Software** is the name given to the programs which interact with the hardware, enabling the computer to perform tasks, eg, Autodesk Inventor.

Hardware can be split into two distinct categories; **Input devices** and **output devices** , examples of which are shown opposite.

COMPUTER NETWORK

A **computer network** is a set of computers connected together for the purpose of sharing resources. The most common resource shared today is connection to the Internet. Other shared resources can include a printer or a file server. Like our school, most companies use file servers so that employees can share files and documents easily. It also allows freedom of working on any computer which is linked to the server with the understanding that all your documents will be stored under your own log in.

Keyboard

Scanner

Digital Camera

Graphics Tablet

INPUT DEVICES

Tracker ball

Mouse

Joystick

Flatbed Plotter

Monitor

Laser Printer

OUTPUT DEVICES

Speakers

Inkjet Printer

Drum Plotter
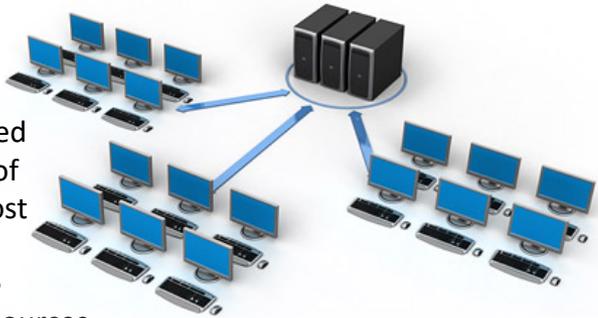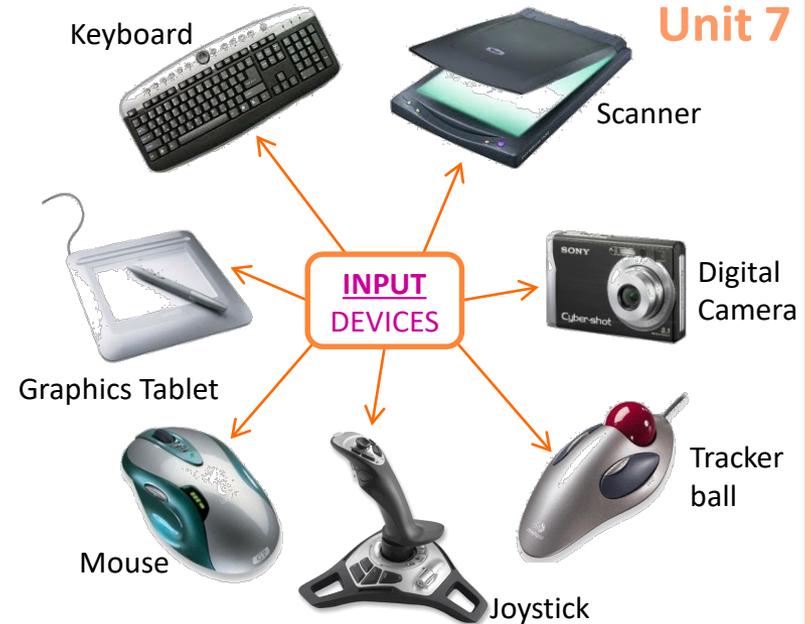
Using technology in DTP

FILE MANAGEMENT

A PC usually contains several disk drives; an internal hard drive and one or more removable-disk drives. Whilst the internal hard drive is used for most general day to day storage of work, removable discs also have their advantages:

➢ **Copying/moving files** – when computers are not connected by a network, the easiest way to transfer files from one computer to another is by copying the file onto a removable disk which can be opened on another computer.

➢ **Backing up files** – Back up copies of important files can be taken as insurance in case any of the original files are corrupted or accidentally deleted

➢ **Archiving file** – When files are no longer needed, they can be stored on a removable disc and removed from the computers internal hard drive. This frees up valuable storage space on the hard drive.

DIGITAL RIGHTS MANAGEMENT

Digital rights management (DRM) is a systematic approach to copyright protection for digital media. The purpose of DRM is to prevent unauthorised redistribution of digital media and restrict the ways consumers can copy content they've purchased.

Removable hard drive

Recordable Compact Disc (CD-R)

USB Removable storage device

ADDITIONAL STORAGE DEVICES

Digital Versatile Disc (DVD)

Memory Card

Online storage – 'the Cloud'
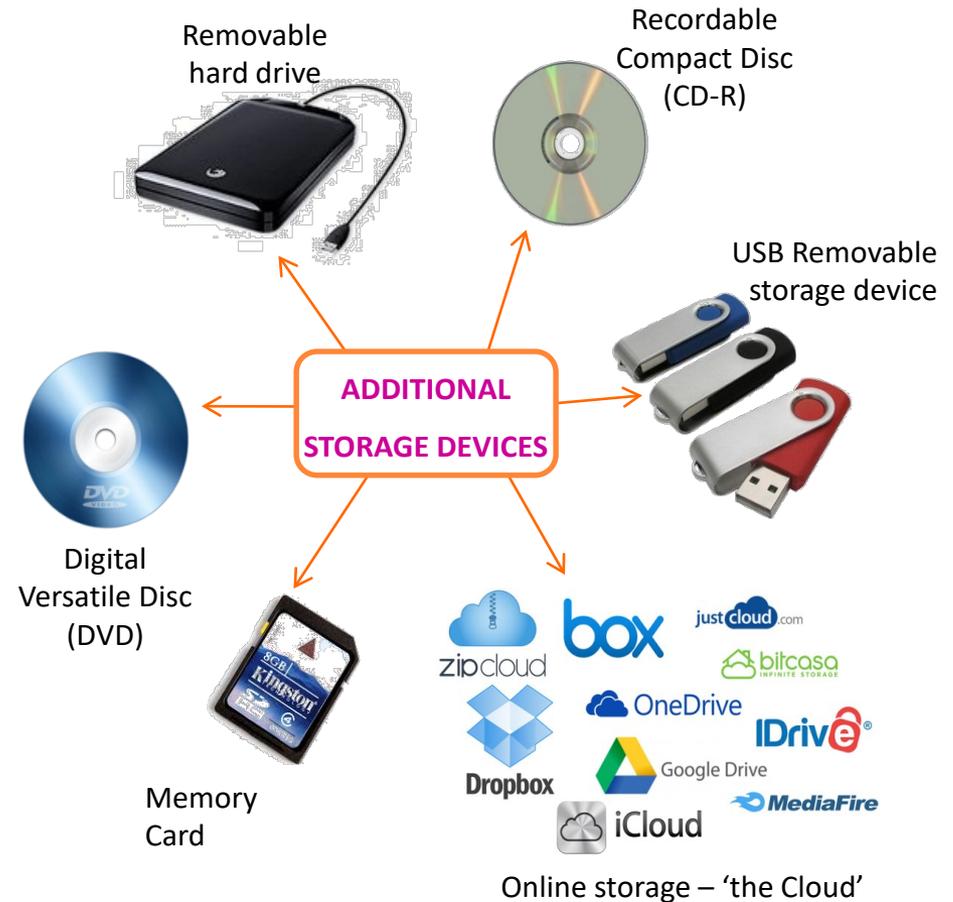
Using technology in DTP

CLOUD COMPUTING

Cloud computing is a model for delivering information technology services in which resources are retrieved from the internet through web-based tools and applications, rather than a direct connection to a server. Data and software packages are stored in servers. However, cloud computing structure allows access to information as long as an electronic device has access to the web. This type of system allows employees to work remotely.

Cloud computing is so named because the information being accessed is found in the "clouds", and does not require a user to be in a specific place to gain access to it. Companies may find that cloud computing allows them to reduce the cost of information management, since they are not required to own their own servers and can use capacity leased from third parties. Additionally, the cloud-like structure allows companies to upgrade software more quickly.

ADVANTAGES –
➢ Offers more flexibility for companies so they can scale up or down quickly and easily to meet demand
➢ Metered service so you only pay for what you use
➢ Companies may find that cloud computing allows them to reduce the cost of information management
➢ Self service—All the IT resources you need with self-service access.
➢ Allows employees the flexibility to work from home.

CLOUD STORAGE

Cloud storage is simply a term that refers to online space that you can use to store your data. As well as keeping a backup of your files on physical storage devices such as: external hard drives, USB flash drives, etc., cloud storage provides a secure way of remotely storing your files. Online storage solutions are usually provided using a large network of virtual servers that also come with tools for managing files and organizing your virtual storage space.

Popular Cloud Storage Services

Task 3

1. Info graphics are a popular way of presenting statistical information.

a. **Explain** how the design of the above info graphic has been influenced by choice of images, colour and typeface, in attempting to communicate the information.   (3)

    ....

    ....

    ....

b. The silhouette of the child at the top of the info graphic was electronically captured and inserted into the DTP document. **Describe** how a hard copy image could be captured and inserted into a DTP document, making reference to file.   (2)

    ....

    ....

    ....

c. The graphic designer decided to make digital copies rather than hard copies of the info graphic. **Describe** the advantages of this decision.   (2)

    ....

    ....

    ....

Glossary of Terms

A

Advancing – Colours that give the impression that the surface they are painted on, is closer to your eye. Advancing colours are also warm colours.

Alignment – Another term for justification.

Animation – To make a movie of the movement of an object. Used to show how an object will move or to walk a viewer within a larger environment like a building.

Annotate – To add written notes to a drawing to make a section clearer to understand.

Assembly – A drawing made up of many parts brought together to give a final more complex result. This can be 2D, 2 1/2D or 3D.

Auxiliary – Extra view looking from a different location than the Front, End or Plan views. Used to help make a part of the main drawing more understandable by looking at it differently e.g. true shape, auxiliary plan and elevations.

B

Banner – In newspaper work, a main headline running across the top of the page. Usually gives the title of the publication.

Baseline – In type, the line on which both capitals and lower-case letters stand.

Bleed – A graphic which extends off the cut edge of the paper. The bleed is the amount that the graphic extends beyond the cut edge – commonly 3mm.

Box – Graphic/text which is ruled off on all four sides/enclosed within a box.

British Standards – A series of rules used all over the world which allows others to read and understand your drawings. Common rules make it easier to eliminate mistakes.

C

CAD – Computer Aided Drawing or draughting. Drawing, using the computer as a tool, to neaten and store your work.

CAG – Computer Aided Graphics. Using the computer to aid in the construction of design type drawing.

CAM – Computer Aided Manufacture. Product is drawn on the screen and then sent to be manufactured using digitally controlled machines.

Caption – The descriptive text accompanying an illustration or graphic.

Centre Line – A line made from long and short dashes which show the centre of a circular piece.

Glossary of Terms

Chamfer –	An edge taken off a corner to make the corner less sharp. Usually drawn at 45 degrees and dimensioned as 5x45º.
Chart –	Diagram, using numerical data, to show specific change over a period of time.
Colour Gradient –	A fill ranging from one colour to a second in even intermediate stages.
Column –	A vertical are of the page usually filled with text. Pages can have a number of them such as a newspaper which may have 7 or nine per page. Used as a grid to formalize the pages of a publication. Graphics can also use columns to fix their positions.
Composition –	Designing the layout of a page by moving the text and graphics until you are happy with the result.
Construction –	Very light lines that are used to build up a complex drawing but are not required when it is complete. Not removed at the end of the drawing.
Contrasting –	Two colours that are opposites of each other. They can be found directly opposite on the colour wheel. Used to great effect to emphasis something.
Conventions –	The rules of drawing.
Corporate Identity –	A certain logo, page layout and use of colour that is specific to a particular company.
CPU –	Central Processing Unit. Another name for the processor.
Crop –	Cutting a picture, electronically, to allow it to fit into a particular space. The graphic can normally be re-cropped at a later date if done in a DTP application.
Cutting Plane –	A flat surface that cuts, or sections, through an orthographic view.

<div align="center">

D

</div>

Datum –	A specific point or line that is used to measure from. Used to increase the accuracy of a drawing.
Detail View –	An insert drawing showing a small part of a whole drawing, often at a different scale, allowing more information.
Diameter –	The length of a straight line going through the centre of a circle from one point to the circumference to a second on the opposite side.
Dimension –	A line, with an arrow at both ends and a size above, which shows the exact size of a part of a drawing. Many other styles of line are used when showing the sizes of circles, curves or angles.

Glossary of Terms

Dimensioning – Adding sizes to a production type drawing. Uses British Standard conventions to allow the drawing to be more readable by all users.

DTP – Designing a page, or series of pages, to be printed. Requires the positioning, electronically, of all text and graphics in an interesting fashion.

E

Exploded View – Splitting an assembly into its many parts. Often used in instruction manuals to explain how machines work.

Export – Saving document in a format suitable for another program or computer system.

Eye Line – The height of the eyes when constructing an object using any of the perspective drawing styles.

F

Folio – Page number.

Font – Shape of lettering used.

Foot – The margin at the bottom of the page.

Footer – A space at the bottom of a page to hold the page number and other minor details. On a document with many pages the footer details are automatically copied onto each page.

Format – The arrangement of text on a page defined by the alignment and text style.

G

Graphic – Any type of drawing dropped onto the page or drawn using specialist tools within the layout package.

Grey Scale – Graphic made from different shades of grey dots. Gives good quality output.

Gutter – Spacing between columns and the extra white space at the centre of facing pages to allow for folding and binding.

H

Handles - The white boxes that appear around a selected item which are used to move or resize it.

Hard Copy – Print or plot onto paper or film. A printout.

Hard Disc – Spinning disc used to store information of all types within the computer. Holds all the applications, data and operating system. Data can be written to and read from the disc quickly. Holds huge amounts of data which is stored safely.

Harmony – Two colours that are neighbours on the colour wheel and that go together well.

Glossary of Terms

Header –   Space at the top of the page ready to hold the title of a page. If a document has many pages then the header is copied automatically onto every page. Usually used to chapter details.

Headline –   Line(s) of larger text placed above the accompanying text to guide the reader to the main story.

Highlights –   Parts of a rendered drawing that show where the light actually strikes the object being drawn. Much lighter than the rest of the rendering.

Hue –   The exact colour, with no highlights, of an object.

I

Import –   Load data from another program. In DTP – the bringing in of a text or graphic file from a second program or from a storage medium.

Indent –   Beginning a line of text further in from the left margin than the rest of the text.

J

Justification –   Setting of type lines in which the space between the words is varied from line to line so that the text lines up with one or more columns.

L

Landscape –   Page orientation. Longer edge to top. Used more often for larger drawings.

Layers –   Allows logical drawing separation. Different elements are drawn on separate levels. Used to isolate parts of a complex drawing – viewing only the parts that are required.

Leader Line –   Light line that joins an edge, or corner, to its corresponding dimension details to show the link.

Library –   Storage of suitable, frequently used clip art items ready for use within particular documents. Suitably formatted for ease of use in all programs accessing the library.

Line Type –   Style and thickness of line e.g. solid or broken – thick or thin.

M

Manipulate –   To change the overall shape of a part by different methods of transformation. To move and adapt a drawings position.

Margin –   Space between the edge of the printed paper and the text or drawings on it.

Media – Materials used for the production of drawings e.g. paint, pencil, ink, pastel, airbrush.

Memory – The part of a computer that holds the applications and data that are actually live. Large amounts of memory (RAM) will make the computer more efficient.

Modelling – Produces a 3D graphic when 2D information is input. Allows the manipulation of the 3D image in real time with the mouse.

Modem – An interface which converts the signal from the computer to one suitable to the telephone system. The signal is then transferred and at the other end a second modem converts the signal back.

N

Network – The joining of many computers together to make one large system. Allows the users to access programs or data from any part of the network.

P

Peripheral – The name given to any part of an office computer system which is not within the main computer box.

Pictorial – Any view which has enough information to fully understand a particular form. Examples of pictorial drawing are isometric and perspective styles.

Plan – A view of an object from above. Usually projected from an elevation.

Point (size) – Common unit of lettering, and line, size. 72 points = 1 inch = 25mm

Portrait – Page orientation. Longer edge to side.

Preliminary – The first section of work where ideas are produced quickly. Sketches are the most often used media although specialist software is now available.

Presentation – A high quality drawing of an object which can be shown to a client to explain the design and action.

Presentation Visuals – High quality drawings, using markers, inks or similar, which are used to show a client a series of possible designs. The effects that are used are to make the drawing come to life – to look real.

Primary – The three main colours of the colour wheel that cannot be made. These are: red, yellow and blue.

Production – Drawings which are prepared ready for the manufacture of the product. CAD is most often used to insure accuracy and to minimize editing time.

Promotional – High quality graphics used to market the product. DTP and CAG work is mostly used to insure the quality and to help in their printing and publication.

R

Radius – The length of a straight line from the centre of a circle or arc to the outside or circumference.

RAM – Random Access Memory. Computer memory that can be changed at any time. After computer shutdown all data is lost. The operating system will often use as much of this as it can to try and speed up your computer. A large RAM will speed up your machine and any program running on it.

Receding – Colours that give the impression that the surface they are painted on, is further away from your eye than it really is. Receding colours are also cool colours.

Rendering – Realistic shading and colouring of an object.

Reversing – White text on a black background.

ROM – Read Only Memory. Memory that can only be read – not changed. Often has important parts of the Operating System in it to increase the speed of the computer and to stop these parts from being corrupted.

Rotate - The ability to turn an image or textbox around from a given rotation point.

S

San Serif – A typeface which has no small lines at the end of the letters e.g. Homerton.

Scale – Drawing size compared with the size of the object. Used to fit a large object onto a set size of paper or to show a high level of detail on a small object.
    5:1 = Drawing is 5 times larger than original.
    1:10 = Drawing is ten times smaller than original.

Secondary – A mix of two primary colours will create a secondary colour.

Serif – A typeface which has small lines at the end of the letters e.g. Times Roman.

Shade – Adding black to a colour to make it slightly darker. This process can be completed many times to give a range of different shades.

Simulation – Testing out a real life situation within the safe environment of the computer. Showing what the interior of a building could look like before building it.

Software – Programs required by the computer.

Solid Model – Model with solid internal material. If sectioned – will show filled.

Sub-heading – A heading appearing within a body of text.

Surface Development – 2D drawing showing the shape of material required to build a hollow model of an object. Uses different line types to show bends and smooth curved surfaces.

Glossary of Terms

Surface Model –   Model which is hollow internally. If sectioned – will show empty.
Symbol –   Small drawing which tells the reader a great deal of information about the drawing for example the projection symbol.

T

Tertiary –   A mixture of one primary and one secondary colour to give a third colour.
Third Angle –   Modern rules of drawing used in most parts of the world.
Thumb Nail –   Very small, hand drawn, graphic which is used to explain an idea quickly.
Tint –   White with a little dash of colour to make a second colour that is slightly off white.
Tolerance –   Giving details of max. and min. dimensions.
Tonal Range –   A range of colours, using one colour as the base, going from very light to very dark.
Tone –   A lit of colours with the same base colour but with each one being slightly darker than the one before.

U

Underline –   A typeface which has a line running under each letter.

W

White Space –   Section of a printed page which has no ink on it.
Working Roughs –   Sketch drawings of the final output but still in a very rough format. Colour is used to highlight important parts and full annotation is used throughout

Notes…