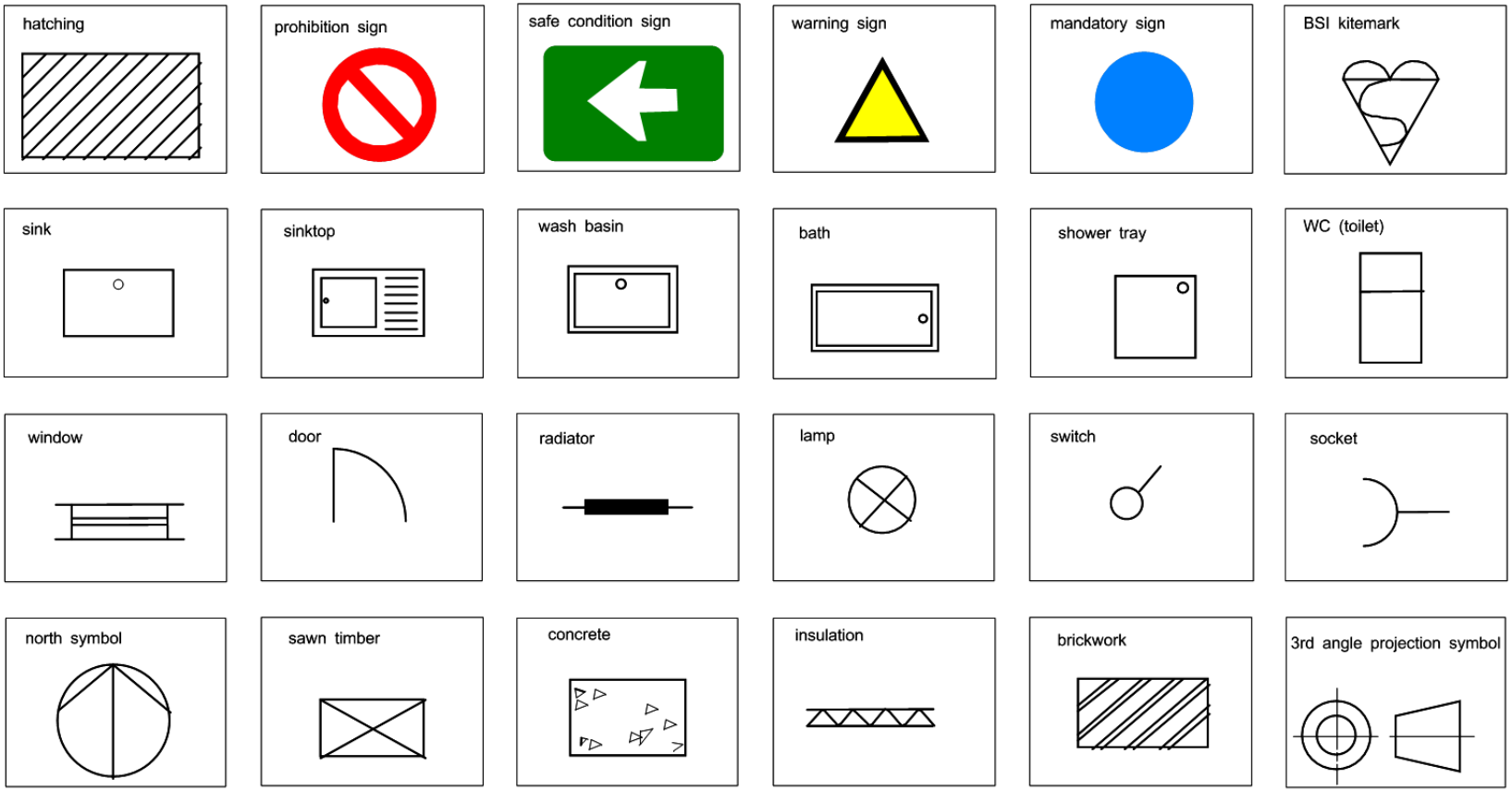
Graphic Communication Notes

Name.....

Graphic Communication



CL centre line
AF across flats
AC across corners
O diameter
R radius
□ Square

Symbols

Graphic Communication

British Standards Institution (BSI) Dimensioning

Graphic Communication

Line Types

A thick continuous line shows **visible outlines** and **visible edges.**

A thin continuous line is used for **projection lines** and **construction lines.**

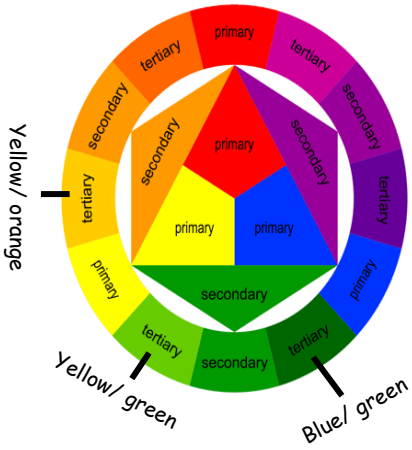
A thin, broken line shows **hidden outlines** and **hidden edges**.

A thin chain line shows a **centre line**, e.g. the centres of circles, cylinders and cones.

A thin double dash chain line is used as a **fold line** to indicate where a surface development should be folded.

A thin chain line with thick ends shows where an object is cut through or sectioned. It is know as a **cutting plane**.

Colour Wheel



Primary Colours: **Red, Blue and Yellow** are the three primary colours.

Secondary Colours: These are produced by mixing two primary colours

- Red + Yellow will give us **Orange**
- Blue + Red will give us **Violet**
- Yellow + Blue will give us **Green**

Tertiary Colours: These are produced by mixing a secondary colour with primary colour.

e.g.

- Yellow + orange gives the tertiary colour **Yellow/ Orange**
- Red + Violet gives the tertiary colour **Red/ Violet**
- Blue + green gives the tertiary colour **Blue/ Green**

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.***

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.**

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.**

Colour Theory

Red - great power of attraction, but too much can be tiring. Hot, bold, warm, exciting, festive, passionate, positive. Red can be associated with rage, aggression, danger, courage, masculinity and speed.

Orange - sunny, cheerful, and happy. Orange is one of the appetite colours associated with flavour and energy.

Yellow - The colour which is most easily seen (luminous). Bright, pleasant, happy, sunny, lively and cheerful. Yellow is often associated with holidays and sunshine.

Green - Green is the most restful of all the colours. Fresh, youthful, cool, quiet, soothing, natural and informal. It is also associated with safety, health and environmental concern.

Blue - Blue is more formal than red or yellow. Cool, sophisticated, aristocratic, serene, passive, elegant and reliable. Rarely used in food due to its association with mould.

Violet - cool, negative, retiring, subdued and solemn. Violet is associated with peacefulness.

Purple - purple combines the courage of red and the nobility of blue. Rich, pompous, impressive and regal. Purple is also seen as the colour preferred by moody people.

Brown - safe, reliable, wholesome, and natural. Brown is often associated with the earth.

Grey - neutral, sedate, restful, dignified, dull and inconspicuous. Grey is often associated with old age.

White - luminous, positive, light, delicate, cold and clean. White is often associated with innocence and purity.

Black - subdued, solemn, heavy and profound. Black is often associated with death, sorrow and evil.

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

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

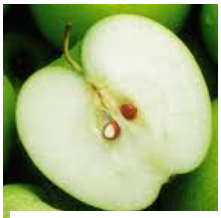
Shade: a darker tone is called a ***shade*** - (a colour mixed with black)

DTP Tools

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

Transparency

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

Text Wrap

When you alter text to wrap around an image or shape

Drop Shadow

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

Flow Text Along a path

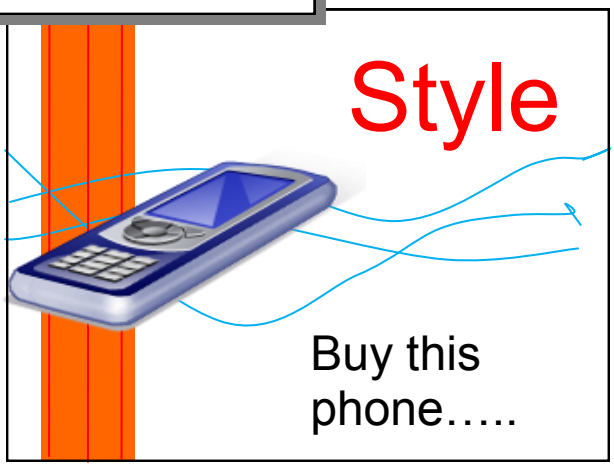
This is when a line or shape is drawn and used as a path for text. You can create any shape and this can make for a more interesting design, drawing the reader in.

Design Layouts

Design Principles

Design principles are techniques which are applied to make the graphic layout more eye-catching, exciting and desirable. These are three of the most common:

Contrast



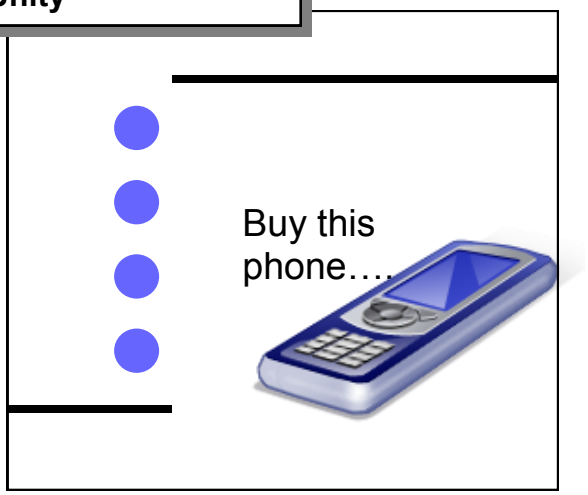
Contrast brings visual excitement and interest and attracts the reader's attention. This display uses contrast in a number of ways:

- The use of wavy and straight lines
- Using orange and blue in the layout
- Creating depth (near and far)
- Using light and dark tones
- Using vertical and horizontal elements

Unity helps keep the display 'together', so it does not become disjointed and the various parts unrelated to each other. In this display, unity is achieved through:

- The same colour being used in the phone and the circles
- The text-wrap around the phone.

Unity



Alignment

Alignment helps organise the layout and give it a structure. It also helps to unify the layout and make it easier to read/ follow. This display uses alignment in several ways:

- White text and product name are aligned.
- Black line and white text
- Black line and product name are aligned.

Impact of using DTP

Advantages:

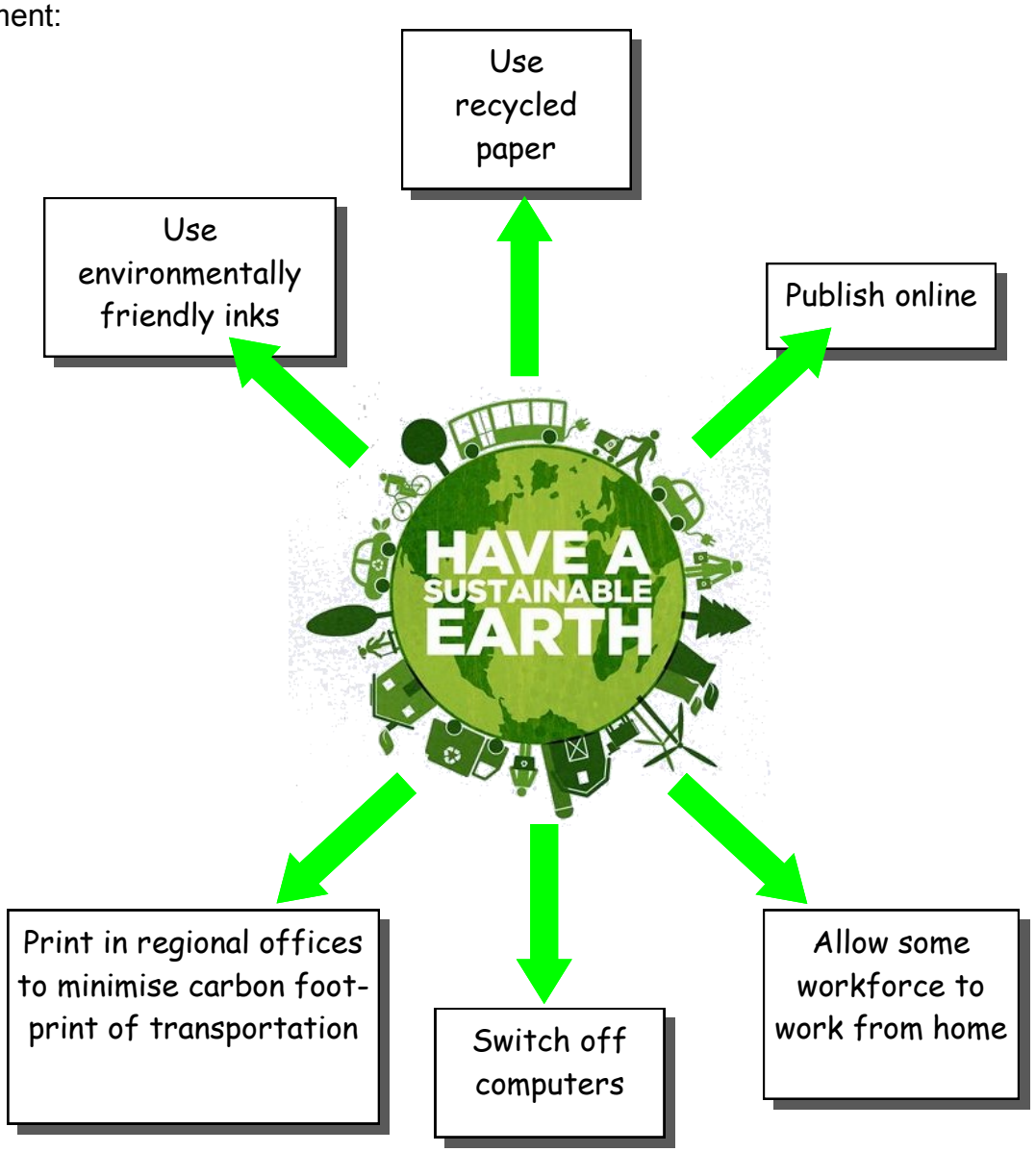
- Documents can be produced more quickly and accurately
- Images and documents can be easily edited
- Layouts, files and documents can be sent quickly over long distances via the internet
- The user can work from home
- It is easy and efficient to communicate with the client

Disadvantages:

- Computer files can be easily lost or stolen
- Computers can fall victim to viruses, malfunction or power failure
- It is initially time consuming and expensive to train staff to use new software

Environmental impact:

All industry has an impact on the environment, including printing and publishing. These are some steps companies can take to minimise their effect on the environment:



3D Modelling

Advantages of 3D modelling:

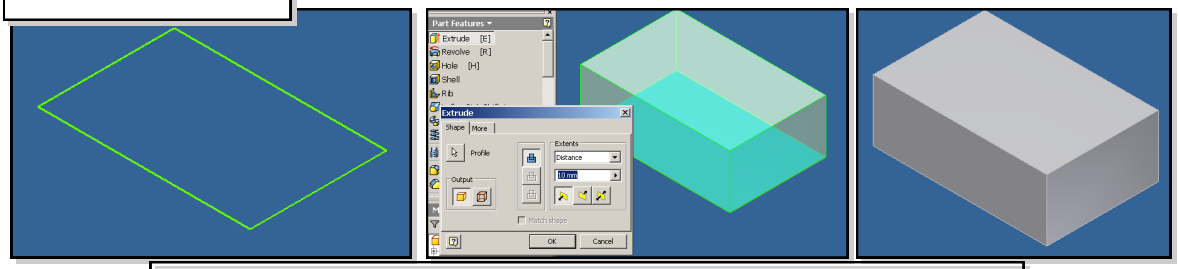
- 3D models can be produced more quickly and cheaply than physical ones
- The designs can be very easily modified and several variations can be quickly produced
- Designs can be sent around the world quickly via the internet

Disadvantages of 3D modelling:

- The software required is initially expensive and training staff to use it is time consuming
- Computer failure, viruses and theft can result in lost work
- The model cannot be **physically handled**

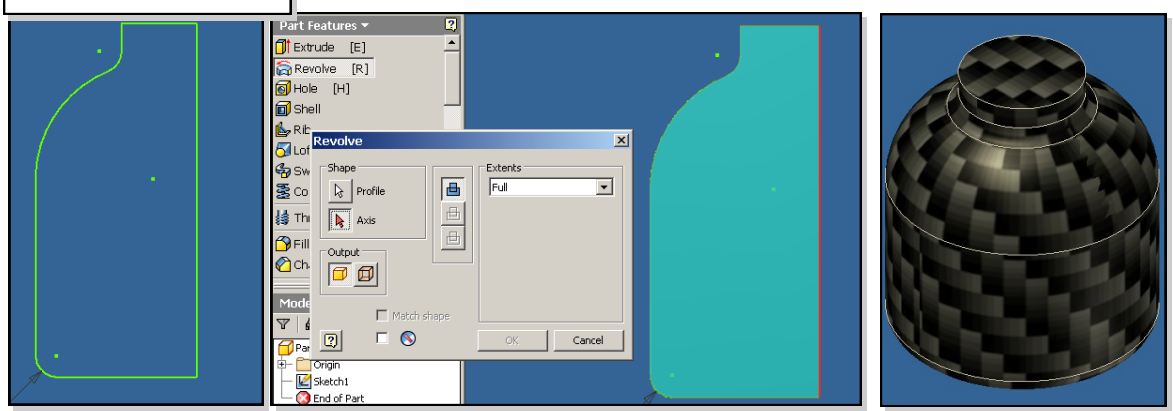
3 D modelling features:

Extrusion



Extrusion is the most common feature used, and allows the construction of a 3D model with **VERTICAL SIDES.**

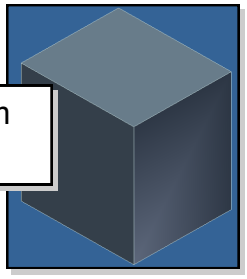
Revolve



Revolve is a feature which is used to construct models which have more complex **PROFILES** such as curves, diagonals, etc.

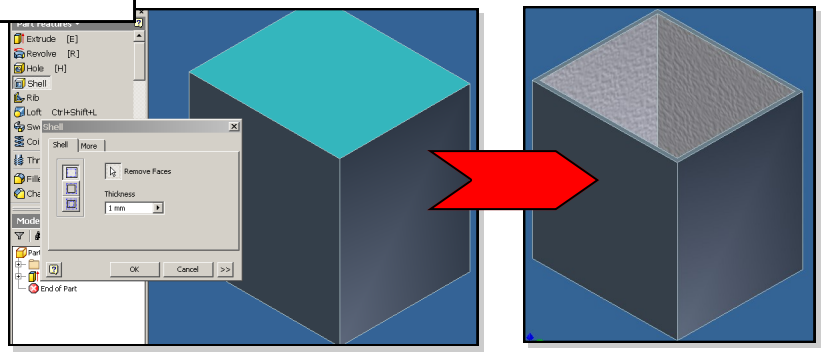
3D Modelling (Cont.)

3 D modelling edits:



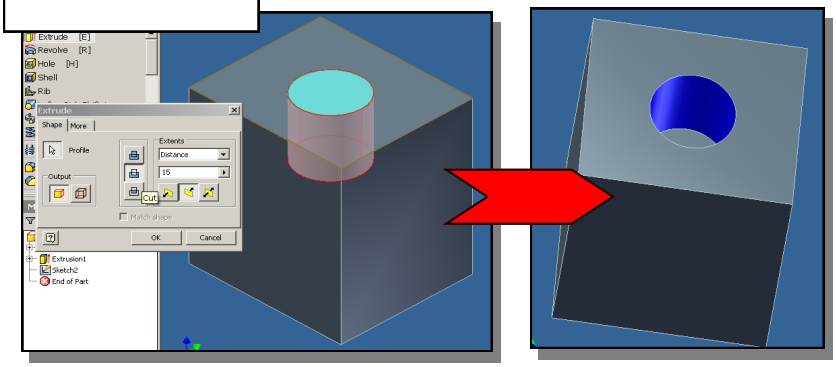
These are functions within the modelling program which allow the original model to be **edited:**

Shell



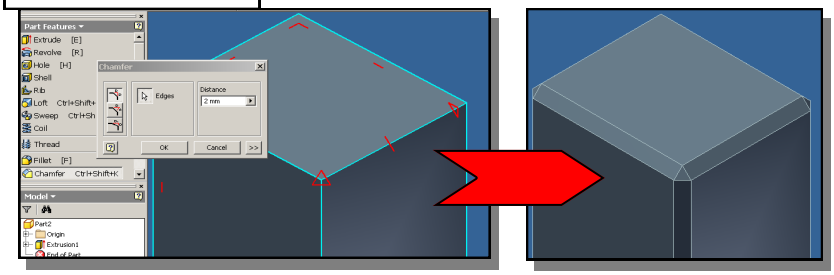
SHELL allows a solid object to be 'hollowed out'; the thickness of the walls being determined by the user.

Subtraction



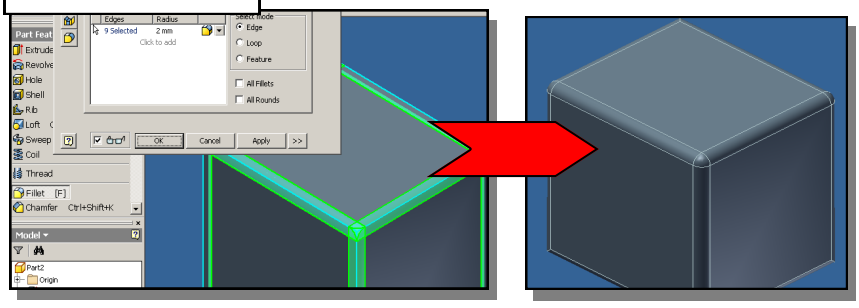
SUBTRACTION allows a section of the solid to be **removed**; the shape of the profile and depth of the removal is determined by the user.

Chamfer



CHAMFER applies an **angled edge**; the size and angle can be varied.

Fillet



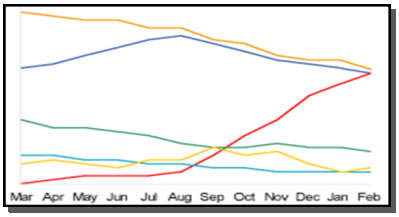
FILLET applies a **rounded edge** to the object; the size and style of the fillet can be varied.

Charts & Graphs

Statistical information often means little when laid out in a simple list or table. The true meaning of the statistics can be brought out much more clearly by the use of the right graph type accompanied by the right graphic.

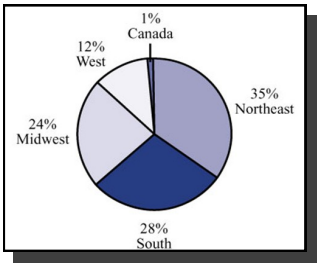
Knowing what type of graph to use for any given situation is a skill you should try to develop and a brief explanation is given here:

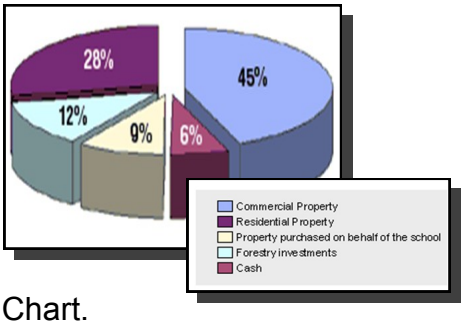
Line Graphs are used to show how values change over a period of time.



- The first example here describes six different values changing over the course of a year.
- The second example uses a graphic to enhance the graph. The graphic is relevant to the topic and therefore works well.

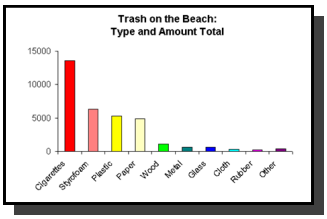
Pie Charts are used to show how values compare to some whole number.

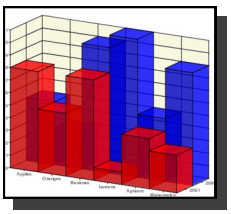


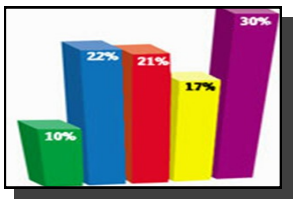


- The first example here shows a basic 2D Pie Chart.
- In the second, the Pie Chart is a bit more complex because it has been shown exploded.
- The third example is the clearest because it has been shown exploded and is 3D. This makes it the easiest to read.

Bar Charts are used to show how values compare directly against other values.







- The first example here shows how a series of values compare with each other and uses a simple 2D layout.
- In the second, the graph is a bit more complex because it compares the five different values and shows them as 3D blocks of different colour
- The third example overlays one year's values against another as well as using a 3D coloured layout.