




Archbishop LanFranc School


Virtual Learning!



Year groups



Designing



Graphics


Electronics


Materials


Manufacturing


Tools


Software

Manufacturing



Joining materials

Wood joints

Joining timber using components

Industrial production techniques

Scales of production

The environment

Environmental issues

Renewable energy

CAD/CAM

Laser cutting

Printing

Useful web links



Manufacturing website

A good manufacturing website from blueprint.

[View the blueprint site >>](#)

Flying pig mechanisms

Check out the flying pig mechanisms site, this has good animations showing teh mechanisms movement.

[View the flying pig site >>](#)

Production

Learn more about production from the BBC bitesize website..

[View the flying pig site >>](#)

Printing



Printing types

Printing has been used for numerous years to produce quality printed graphics. There are many different printing methods available all methods have different specific benefits. When printing you will need to consider different factors when choosing a printing type, these factors vary from cost, quality and quantity needed. Here are the main categories types for printing.

1. Relief printing
2. Intaglio printing
3. Screen printing
4. Planographic printing
5. Dry printing

1. Relief printing

Relief printing is a process where inked wood blocks, lino or metal is pressed against paper to create a print. Blockprinting and letterpressing are the main types of relief printing. Relief printing includes:-

- Letterpress – used for Small runs.
- Blockprinting – used for small and medium sized runs.
- Flexography – used for long runs at low cost.



Letterpress printing



Blockprinting



Flexography printing

2.) Intaglio printing

The main type of intaglio printing is Gravure this is used for making high quality prints in large volumes. However it is very expensive to set up as the gravure plate is made photographically. The plates are expensive and it is hard to change colours. The gravure machines are very large and print at a very high speed.

- Gravure – High volumes, high quality printing.



Gravure printing

3.) Screen printing

Screen printing uses simple stencils and produces moderately cheap prints fast and effectively. However screen printing is not very good for fine detail. There are more advanced commercial presses available that can produce thousands of copies per hour and can produce a good depth of ink on generally most surfaces. Screen printing is used to print onto t-shirts, bags, banners, signs, shopping bags, posters, packaging and flyers.

- Screen printing – cheap fast prints, used for large runs



Screen printing

4.) Planographic printing

Planographic printing is mainly used for business purposes. The most widespread type of Planographic printing is offset lithography. Planographic printing involves the print or ink attracting grease and rejecting water. The opposite areas which are not being printed on reject the grease and attract the water. This method works because water and grease do not mix. This is a very high speed and cheap method of printing which makes it widely used.



Lithography printing

- Lithography – medium to large print runs.

5.) Dry printing

Dry printing is given its name because the printing process is dry. Dry printing is mainly used by photocopiers and laser printers.

- Photocopiers - single to small runs used within the home or business.
- Laser printers- single to small runs used within the home or business from a pc.



Photocopy printing



Laser printing



Quiz time!

Mr DT says 'Read the text above and then answer these questions below'. Write your answers on a sheet of paper, don't forget to write your name on the sheet!:-

- 1.) What are the five printing types?
- 2.) How does relief printing work?
- 3.) Name three types of relief printing?
- 4.) What are the problems and benefits of gravure printing?
- 5.) What is screen printing mainly used for?
- 6.) What is Planographic printing mainly used for?
- 7.) How does dry printing work?
- 8.) Name two types of dry printing?



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