

WORKING WITH PAPER AND BOARDS

V.Ryan © www.technologystudent.com 2019

This mobile revision pdf is based on detailed work found in the 'GRAPHICS' section. Tap on the green link button below to go to the website.



Tap the blue button to view all work covered by this Revision PDF



V.Ryan © www.technologystudent.com 2019

WORKING WITH PAPER AND BOARDS

V.Ryan © www.technologystudent.com 2019

1. WORKSHOP TOOLS AND EQUIPMENT

2. BASIC MANUFACTURING TECHNIQUES

3. STANDARD COMPONENTS

4. SEALS AND SEALING TECHNIQUES

5. BINDING TECHNIQUES

IMPORTANT

IT IS RECOMMENDED THAT YOU ALSO
DOWNLOAD THE FOLLOWING APPS FROM
THE MOBILE APP SECTION OF
technologystudent.com

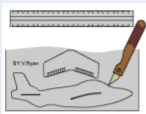
1. SOURCES, ORIGINS, PAPER AND BOARDS
2. PACKAGING AND ASSOCIATED
INFORMATION
3. PRINTING PROCESSES
4. PACKAGING SYMBOLS

V.Ryan © www.technologystudent.com 2019

TOOLS AND EQUIPMENT

V.Ryan © www.technologystudent.com 2019

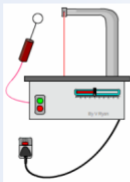
Tap the images for more information



A craft knife and cutting mat are essential model making tools.



A selection of scissors to cut shapes.



A hot wire cutter can be used to shape a variety of model making foams including Styrofoam.

Tap the blue button for the next page.



Tap the red button to return to the Contents page



TOOLS AND EQUIPMENT

V.Ryan © www.technologystudent.com 2019

Tap the images for more information



A glue gun can be used to quickly fix materials together.



Glues such as UHU, POR, POLY ZAP and Balso glue, are suitable for models.



A refillable pencil is very useful especially if you are constructing a drawing that needs a constant thickness of line.



A protractor is used to measure angles. A typical protractor is a semi-circular piece of plastic.

Tap the blue button for the next page.



Tap the red button to return to the Contents page



TOOLS AND EQUIPMENT

V.Ryan © www.technologystudent.com 2019

Tap the images for more information



Stick / gel glues such as Pritt Stick are used for gluing card and paper.



Spray Glue - paper / card can be peeled back and repositioned several times before the adhesive properties of the glue disappear.



Double sided tape is a semi-permanent method of joining modelling materials. It is very useful when joining plastic and card based materials.

Tap the blue button for the next page.



Tap the red button to return to the Contents page



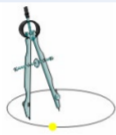
TOOLS AND EQUIPMENT

V.Ryan © www.technologystudent.com 2019

Tap the images for more information



Brass fasteners are very useful when joining modelling card together, especially if movement is needed.



A compass is an absolute essential piece of equipment. It is well worth buying a good set which includes at least two compasses allowing the drawing of small and large circles.



A fine pen (colour - normally black) is used to draw permanent, accurate lines. Fine pens are available with various thicknesses of 'tips'

Tap the blue button for the next page.



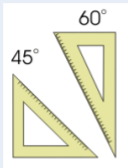
Tap the red button to return to the Contents page



TOOLS AND EQUIPMENT

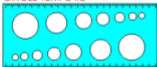
V.Ryan © www.technologystudent.com 2019

Tap the images for more information

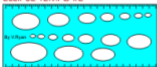


Set Squares are used to draw accurate angles. The most common are 45 and 60/30 degrees.

CIRCLE TEMPLATE



ELLIPSE TEMPLATE



Circle, ellipse and other drawing stencils, to aid accurate and quick drawing

Tap the blue button for the next page.



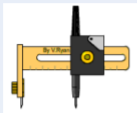
Tap the red button to return to the Contents page



TOOLS AND EQUIPMENT

V.Ryan © www.technologystudent.com 2019

Tap the images for more information

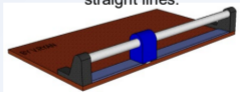


A compass cutter is used to cut circles in paper and light card. It can be adjusted to cut a variety of accurate sizes.



A roller cutter is used to cut curves and arcs in paper and card. A cutting mat should be placed below the card.

Paper cutters are used to cut card and paper very accurately in straight lines.



Tap the blue button for the next page.



Tap the red button to return to the Contents page

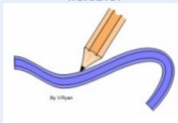


TOOLS AND EQUIPMENT

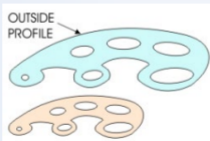
V.Ryan © www.technologystudent.com 2019

Tap the images for more information

A Flexi-curve is used to draw curves. It can be formed into almost any curve as it is flexible.



French Curves are used to draw curves by finding the section of curve that matches the desired shape on the profile of the curve.



Tap the blue button for the next page.



Tap the red button to return to the Contents page

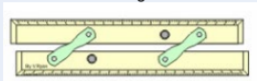


TOOLS AND EQUIPMENT

V.Ryan © www.technologystudent.com 2019

Tap the images for more information

A Parallel Rule is used to draw parallel lines. It is basically two rulers held together by two linkages.



An Adjustable Square is a set square which can be adjusted to almost any angle.

Tap the blue button for the next page.



Tap the red button to return to the Contents page



TOOLS AND EQUIPMENT

V.Ryan © www.technologystudent.com 2019

Tap the image for information and exercises



CREASING TOOL –
used to run along a line,
creating a 'crease',
allowing a clean sharp
fold



ROLLER CREASING TOOL
– used to run along a line,
creating a 'crease', allowing a
clean sharp fold

Tap the blue button for the next page.



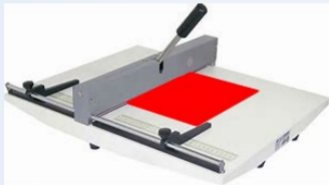
Tap the red button to return to the
Contents page



TOOLS AND EQUIPMENT

Tap the image for information and exercises

CREASING MACHINE – Pressure is applied along a line, on the card, using the handle. This ‘creases’ the card, making it easy to fold the card accurately.



Tap the red button to return to the
Contents page

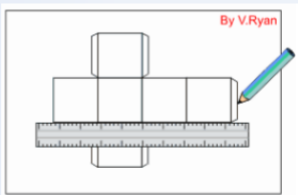


STAGES – MAKING A SIMPLE PACKAGE

V.Ryan © www.technologystudent.com 2019

Carefully draw the outline of the net / development using a pencil. A 4H pencil is most suitable because the pencil lead is quite hard and so lines drawn with it are faint

Tap the image for information and exercises



Tap the blue button for the next page.

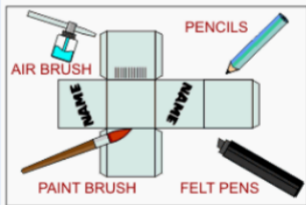


Tap the red button to return to the Contents page



Colour and shade can be added by the use of a range of techniques and equipment. This could include the use of an air brush, felt pens, coloured pencils, aerosol paint sprays and even paint brushes.

Tap the image for information and exercises



Tap the blue button for the next page.



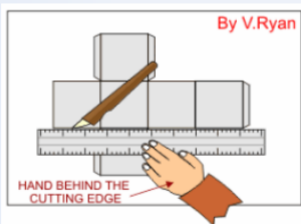
Tap the red button to return to the Contents page



A craft knife is then used to run down each of the pencil lines (do not cut through the card). It is important that a steel ruler / safety ruler is used as the sharp blade of the craft knife is less likely to slip. This allows for easy folding later.

Alternatively, place a ruler on each line and run a creasing tool along the lines. This allows for easy folding as well.

Tap the image for information and exercises



Tap the blue button for the next page.



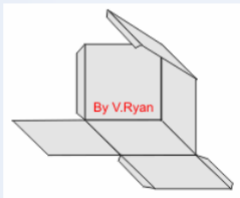
Tap the red button to return to the Contents page



The net / development (package) is folded. A good tip is to place a ruler on each line and fold the card. The use of a ruler ensures that the fold is along the line. The net can be glued together so that it takes on the form of the package.

Creasing tools or a creasing machine can also be used to fold the package.

Tap the image for information and exercises



Tap the red button to return to the Contents page



PAPER FASTENINGS

V.Ryan © www.technologystudent.com 2019

Paper fasteners are available in a range of sizes. They are ideal for holding pages together. They are supplied in a variety of colours.

Tap the image for information and exercises



Tap the blue button for the next page.



Tap the red button to return to the Contents page



TREASURY TAGS

V.Ryan © www.technologystudent.com 2019

Treasury tags are used to hold pages together. They vary in length according to the number of pages that are to be held. They are sometimes used to bind several pages together.

Tap the image for information and exercises



Tap the blue button for the next page.



Tap the red button to return to the Contents page



BULLDOG CLIPS

V.Ryan © www.technologystudent.com 2019

These are often used in conjunction with a clipboard. They are supplied in a range of styles, materials and colours. Pinching the clips together, opens a powerful spring.

Tap the image for information and exercises



Tap the blue button for the next page.



Tap the red button to return to the Contents page



PRONG PAPER FASTENINGS

V.Ryan © www.technologystudent.com 2019

These are designed to hold 'firmly' sheets of paper together. They fit standard hole punch sizes. They are normally supplied as 'metal' and 'plastic'.

Tap the image for information and exercises



Tap the blue button for the next page.



Tap the red button to return to the Contents page



PAPER CLIPS

V.Ryan © www.technologystudent.com 2019

The first paper clip design was patented by Samuel B. Fay in 1867, in the US. They have been used for more than a century and are still the most popular fastening. Used to temporarily hold sheets of paper / card together.

Tap the image for information and exercises



Tap the blue button for the next page.



Tap the red button to return to the Contents page



STAPLES

V.Ryan © www.technologystudent.com 2019

Staples are a common accessory, used to hold pages together, quite often permanently. They are supplied in a range of sizes. A stapler is charged with staples and individual staples are 'pressed' in position.

Tap the image for information and exercises



Tap the blue button for the next page.



Tap the red button to return to the Contents page



SELF ADHESIVE PADS

V.Ryan © www.technologystudent.com 2019

Self adhesive pads are useful for hanging posters on walls, joining card to card and for sticking on the underneath of furniture, to help prevent damage to surfaces.

Tap the image for information and exercises



Tap the blue button for the next page.



Tap the red button to return to the Contents page

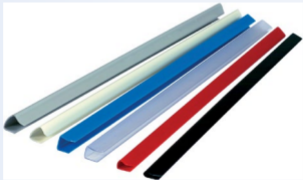


SLIDE BINDERS

V.Ryan © www.technologystudent.com 2019

Slide binders are used to hold pages together, usually forming a booklet. The advantage is that they slide over the paper and can be removed relatively easily, when required. They are supplied in a range of colours and sizes.

Tap the image for information and exercises



Tap the blue button for the next page.



Tap the red button to return to the Contents page



FOLD BACK CLIPS

V.Ryan © www.technologystudent.com 2019

These are used to hold papers together and are similar to bull dog clips. Simply fold back the chromed arms to open the clip and slide over the papers. Then, return the chromed arms back to their original position.

Tap the image for information and exercises



Tap the red button to return to the Contents page



WAX SEAL AND STAMP

V.Ryan © www.technologystudent.com 2019

Once regarded as a traditional way of sealing envelopes and also used by solicitors as a 'legal' seal. This technique is growing in popularity again. A stick of sealing wax is heated and softens. The stamp is used to 'squash' the wax, forming a seal that prevents the envelope from coming open.

Tap the image for information and exercises



Tap the blue button for the next page.



Tap the red button to return to the
Contents page

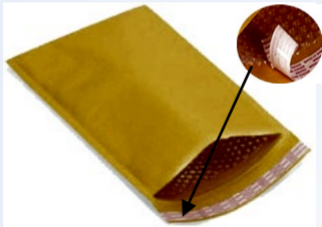


TAMPER PROOF ENVELOPE

V.Ryan © www.technologystudent.com 2019

This is an envelope that has a self adhesive strip. When the strip comes in contact with the envelope, it sticks to the surface, securing the envelope.

Tap the image for information and exercises



Tap the blue button for the next page.



Tap the red button to return to the Contents page



ADHESIVE SEALS AND SEALING TAPE

V.Ryan © www.technologystudent.com 2019

These are the modern equivalent of wax seals. The smaller seals are ideal for envelopes and the tape, is suitable for boxes and packages.

Tap the image for information and exercises



Tap the blue button for the next page.



Tap the red button to return to the Contents page



GUMMED ENVELOPES

V.Ryan © www.technologystudent.com 2019

These are the most common of all envelopes. The seal is moistened and pressed down, 'gluing' the envelope shut.

Tap the image for information and exercises



Tap the blue button for the next page.



Tap the red button to return to the Contents page



REUSABLE ENVELOPES

V.Ryan © www.technologystudent.com 2019

There are a limited number of designs, that enable envelopes to be reusable. Some paper / card based envelopes can be resealed by winding string around two circular fasteners.

Tap the image for information and exercises



Tap the red button to return to the Contents page



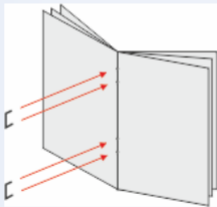
SADDLE STITCH

V.Ryan © www.technologystudent.com 2019

This is a simple and common practice. Several pages are creased and folded along their centre and stapled (usually at least twice), with a long jaw stapler.

Practical application - magazines, pamphlets, logbooks etc.....

Tap the image for information and exercises



Tap the blue button for the next page.



Tap the red button to return to the Contents page



PERFECT BINDING

V.Ryan © www.technologystudent.com 2019

Applied to paper and hard backed books. The pages are split into sections and glued into a heavy weight card / paper backing. School textbooks are often bound in this way.

Tap the image for information and exercises



Tap the blue button for the next page.



Tap the red button to return to the Contents page



WIRE BINDING

V.Ryan © www.technologystudent.com 2019

These are extremely common. The pages are held together with either a wire or plastic spiral binding. Notebooks, sketchbooks and documents are often bound using this technique.

Tap the image for information and exercises



Tap the blue button for the next page.



Tap the red button to return to the Contents page



SPIRAL BINDING

V.Ryan © www.technologystudent.com 2019

Very common, especially seen with notebooks. The spiral, which can be metal or plastic, is turned through corresponding holes in the paper.

Tap the image for information and exercises



Tap the blue button for the next page.



Tap the red button to return to the Contents page

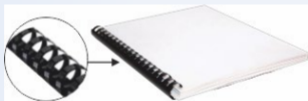


COMB BINDING

V.Ryan © www.technologystudent.com 2019

Similar to spiral binding, but with plastic being used. They are manufactured from plastic and supplied in a range of colours.

Tap the image for information and exercises



Tap the red button to return to the Contents page

