

# PRINTMAKING TECHNIQUES Resource Box

## NOTES FOR TEACHERS



These notes are intended primarily for Art and Design (KS3+). The notes are divided into three sections focusing on pre-visit preparation, using the resources in the Museum, and post-visit follow-up in the classroom.

### **BEFORE YOUR VISIT**

Before visiting the Prints & Drawings Study Room, pupils should be introduced to the principles of the printmaking processes. Start by discussing the fundamental difference between printing and drawing. Ask pupils to shade in a strip across a sheet of paper with a pencil, progressing from light to dark. Discuss how they were able to achieve a gradation of tone by varying the pressure applied to the pencil.

In printmaking, a surface is coated with ink and pressure is applied to bring it into contact with the paper. In contrast to drawing, printing generally requires the application of pressure to be even. If a variation of gradated tone is desired, it must be achieved by a special combination of marks. Printing is therefore a less immediate process than drawing. Introduce your pupils to the three main techniques outlined here. Encourage them to experiment with marks and effects and to make modifications until they are satisfied with the results. Then the block, plate or screen can be used to make a number of almost identical images.

**Relief printing** – In a relief print, the raised portions of the print block are inked, and the ink is transferred on to the paper to make the print. The raised portions can be built up from the printing surface, but it is more usual to cut away the surface. Relief blocks can be made from any material that can be worked, such as lino, clay, wood and even vegetables.

A simple relief print can be made from a textured surface such as corrugated card or a cereal box opened to reveal the folds. Roll or spread a little ink on a slab as evenly as possible. The pigment should be transferred to the textured surface carefully with a roller or dabber. A sheet of newsprint papers should be laid on the inked surface and a sheet of cartridge paper or thin card placed on top to prevent tearing during printing. To make the print, gently but firmly and evenly rub on the back of the protective sheet with finger-tips, a pad of newspaper, the back of a spoon or a clean roller.

**Stencil printing** – In stencil printing a stencil or screen forms a barrier between the ink and the paper. Ink is only allowed to pass through where the barrier has been removed.

Simple stencils can be made by tearing holes or cutting designs in a sheet of strong paper. The stencil is then placed over the paper to be printed, and poster paint dabbed through the openings with a stiff brush. The poster paint should be of thick consistency and dabbed on a little at a time, in order not to smear the paint under the edges of the stencil.

**Intaglio printing** – In intaglio printing it is the recesses on a surface on a plate that are filled with ink. The deeper the recess, the more ink it holds. When the surface of the plate is brought into contact with paper, the ink is transferred from plate to the paper. The process of etching uses acid to bite the recesses into a metal plate. In drypoint the recesses are scored directly on to the printing plate.

Pupils can make a simple intaglio print without using acid by drawing with a sharp craft knife on a sheet of hardboard, or by using a pointed tool such as a scribe on a sheet of acrylic. These methods produce a similar effect to drypoint by creating a raised edge, called a burr, alongside the grooves. The surface is covered with ink using a hard roller, and then wiped clean with a dry rag. The ink remains only in the recesses and on the raised burrs and is transferred to the paper.

### **AT THE MUSEUM**

Provide pupils with a copy of the chart 'Identifying a print'. Ask pupils to identify the printmaking processes used in a few of the prints in the Prints & Drawings Study Room. A magnifying glass would be helpful as they will need to look closely at the printed marks. The following questions and answers should give pupils enough clues to make their own judgement. Most of the questions require pupils to look at how lines are formed, and how areas of continuous tone and black are printed.

Once pupils have identified the printmaking process and given their reasons, they should record some of the marks that printmakers have used to show gradations of tone. Ask pupils once again to shade a strip across a sheet of paper using a black or another dark-coloured pencil, progressing from light to dark as before. But this time they should use only those marks print makers have used – cross-hatching, lines of varying thickness, dots, stipple, lozenges, etc. – copying them from the prints they are looking at, without varying the pressure on the pencil. Pupils could also draw a similar strip using white pencil on black paper. These strips can be compared with the earlier strips in which gradations of tone were achieved using variable pressure.

Pupils could compare several prints to see how the different kinds of marks and tones used in the various printmaking techniques achieve their result. How is space suggested? Diminishing detail, lines of increasing delicacy, hatching and modification of colour are some of the methods. How have different printmakers treated such subjects as faces and sky? Pupils could choose their own to compare. Why do some images look more realistic than others?

Q. Are the lines uneven or of varying width?

A. The lines in intaglio prints may not vary much in width, as they are often formed by a tool in an unbroken movement. In relief prints, the printmaker cuts away what is to be white lines and unprinted areas, leaving behind the lines and areas to be printed. This 'white line' process results in lines the edges of which have been created separately and are therefore likely to vary in width.

Q. In a densely lined area of the print are the white lines more continuous than the printed ones?

A. Pupils should try to imagine the printmaker drawing or engraving any lines of odd shape in a print. If it is easier to imagine the white areas around being cut away, then the print is more likely to be by the relief process.

Q. Are the pale lines broken up by bits of white?

A. Find a line that looks paler than others. If close examination reveals that it is broken up by white lines or spaces between the ink, then this is a sign of a relief print.

Q. Are areas of tone made by many parallel lines or do they include white diamonds.

A. Cross-hatching is one of the main methods used to give different tones in both intaglio and relief prints. Intaglio prints generally have even printed lines in cross-hatching, as it is relatively easy to draw intersecting straight lines. However, in relief prints it is not the printed lines that are drawn, but the white diamonds that have to be cut away. By following a single line, it can sometimes be seen to have sudden changes of width and direction, or to break and re-form. This is an indication of relief printing.

Q. Are the areas of solid print made up of closely spaced lines or patterns?

A. If the printed area consists of closely spaced lines, possibly cross-hatched, then this suggests intaglio printing.

Q. Do the printed areas contain small white specks or fine white lines?

A. These both tend to suggest a relief print. In intaglio prints such marks could easily have been removed from the print block with a knife or engraving tool. They will rarely be confused with a deliberately achieved speckled effect. Similarly, in stencil prints the stencil could have been cleared to allow the ink to pass through.

Q. Is the ink raised in ridges on the paper?

A. Look at the darkest lines on the print. If the ink appears as ridges, it is caused by the ink building up in the recesses in the surface of the print plate and is evidence of an intaglio print. Though in extreme cases a relief print might emboss the paper, it is more likely that the ink will appear flat. The ink on stencil prints also appears flat.

Q. Do the printed lines have a soft, furry edge?

A. This is evidence of drypoint, a type of intaglio printing. When the point of the tool is scratched into the print plate, it throws up a burr. This sometimes captures ink and causes the printed line to have a furry edge.

Q. Do the areas of white in the print contain very thin, faint lines?

A. These marks suggest accidental scratches on the surface of the print plate of intaglio prints, which have picked up a small amount of ink.

Q. Are there large areas of flat, dense print?

A. This one of the few positive indicators of a stencil print. In a cut-stencil print, there may also be a darker line around areas of flat print, where the ink has built up at the edge of the cut-out image. The only other evidence that print was made by the stencil method is the absence of marks that suggest an intaglio or relief print.

### **BACK AT SCHOOL**

Using the knowledge they have gained in the Prints & Drawings Study Room, pupils should work out ways to incorporate some of the printmakers' techniques they have seen into the making of their own prints. Encourage them to use different types of line and gradations of tone.

The techniques available to pupils will be dictated by resources available in the school. The following methods require little equipment.

**Relief printing** - A simple relief printing block can be made by cutting thin, smooth card into shapes, and gluing these in layers on a backing block with PVA adhesive. Seal the block by coating it with colourless furniture polish. It can then be inked and printed on to a sheet of damp cartridge paper by applying even pressure. The cartridge paper should be prepared by wetting it the day before covering it in polythene and leaving it under a weight overnight. Some experimenting with the correct dampness may be necessary.

Lino or press-print can be used for making relief printing blocks.

**Stencil printing** - A number of cut-stencils can be used on the same print, and by printing each stencil in a different colour, interesting effects can be achieved. For simple screen printing, tightly stretch organdie or other inexpensive mesh fabric over a wooden frame and stable firmly. Stick a border of tape inside the frame to the surface of the mesh to prevent ink leaking through at the edges. Draw an image on the mesh with wax crayons. The wax should show the parts of the image that will not be printed. Then place the screen on top of the paper to be printed. Mix water-based paint or powder colour with wallpaper paste to a fairly thick constituency. Spoon a little of this along one side of the mesh, and using strip of cardboard the width of the frame, firmly and evenly drag the paint along the frame. The paint mixture will not pass through the areas covered by wax.

**Intaglio printing** - Lino can also be used to make intaglio printing plates, if care is taken in the printing. Water- or oil-based ink is worked into the grooves cut into the lino. The surface is then wiped clean with a rag dampened with water for water-based inks, or with white spirit for oil-based inks, taking care to leave the ink in the grooves. To print, lay a sheet of damp cartridge paper on the lino plate, and apply an even pressure.

There are many ways of applying even pressure to a printing block or plate to form the printed impression. The block or plate and the paper that is to receive the ink can be run through a press or mangle between a sheet of hardboard and half a dozen sheets of blotting paper. A simple press can be made by placing several sheets of newspaper (for packing) or a layer of felt over the printing paper, with a drawing board on top. Pressure can then be applied standing on the drawing board. Pupils can experiment with different ways of applying pressure; professional printmakers have used all manner of things, including plastic water-filled garden rollers.