

RELIEF PRINTMAKING BASICS

Professor: James Bailey

The foundation of relief printing is that areas cut away do NOT print. In other words, you CUT WHITE. The parts of the block that remain uncut DO print. If a line is cut into a block of wood, then rolled with black ink, the cut line is WHITE and the surrounding areas are BLACK. This, therefore, is largely the opposite of drawing. In a sense, it is a drawing with white onto black paper.



BLOCKS

Blocks can be made from any number of materials, traditionally various types of wood were used, Shina, birch, cherry, pine, fir or MDF along with maple for engraving. Wood has a grain structure and varies in hardness, two factors to keep in mind when cutting, but wood can also give you beautiful textures. Battleship Linoleum, along with Sintra plastic, rubber, foam, found objects and 3D printed matrixes are other materials that can be relief carved.

SEE: DRAWING & IMAGE TRANSFER Handout for more information.

CUTTING



Hand tools are traditionally variations of a knife or chisel, and “U” shaped gouges and “V” shaped gouges (also referred to as parting tools), in different sizes. Power tools such as dremels, routers, drills, sanders and jigsaws, along with steel brushes, hammers, punches and many more can be effective as well.

Gouges (U & V), can cut a variety of line weights, with tapering effects growing and vanishing to beautiful effect.

Stippling and cross hatching can generate a wide range of tonal variation. Patterned cutting relates decorative interpretations on tonality. High contrast areas (pure white, pure black) can work effectively to translate a more photographic posterized look.

Once you learn what a tool is supposed to do, investigate what else you can make it do. Rock it across the block, stab it into the block, flick it. Experimentation and inventiveness are the keys to relief cutting, and can only be learned by doing it. Invent new ways to use your tools. Likewise, if your wanting to cut a specific item, such as a tree, but not sure how to proceed, google “woodcut trees” and you’ll quickly find a wide range of approaches that you can expand on.

****SAFETY TIP:

- 1-When cutting, use a bench hook or rubber matt to prevent your block from slipping.
- 2-Make a DUCT TAPE GUARD, by wrapping duct tape around your index and middle finger of your non-cutting hand. This way if your tool slips it will hit the duct tape. This is the most common injury with beginners.

FIRST AID KIT:

Is located on the North Wall between the two doors.

HELPFUL TIPS:

1-When you are cutting for the first time, make trial cuts on a scrap piece of the same material.

2-When you do begin cutting on your block, begin in an area that is not critical to the success of the work. For example, if you are doing a portrait don't begin with the facial features, where a mistake will have grave consequences. Begin instead, on the edges perhaps, to gain further skill and confidence in your cutting, and where a slip of the tool won't result in a glaring mistake.

As you investigate how to use the tools, some basics will probably still apply.

1. Rule: a cut line prints WHITE against a dark background.
2. Outlining an object is typically a bad visual solution, as it flattens the form. Vary the line weight and letting solid areas of white or black define edges for you.
3. Plan the direction of your cuts to complement the subject and composition. When large areas of the block are removed-to create a white area, for example-it's common for residual cut marks to still receive some ink and therefore show up in the print. This is called *chatter*. Since chatter is often inevitable, plan for it, work with it, develop it, use it. Make sure your cuts are directional and interesting. There are ways to eliminate chatter when printing, so consult with Jim to learn methods for doing this based on the specifics of your block.

PROOFING During Cutting

Proofing refers to making a sample print to check the progress of the block. There are two types of proofing. One is done without inking up the block to see the progress of your cutting. The second type is when you are using ink to make an actual print to check your progress or prior to printing an edition.

- 1) Non-ink method/
 - 1-Lay your cut block face up on a surface.
 - 2-Lay a piece of carbon paper or red oxide paper (carbon side face up) on top of your block.
 - 3-Lay a piece of newsprint on top of the carbon paper and burnish the back to transfer your cut marks.

Variation:

You can also put a piece of newsprint on top of your block and rub it with charcoal or graphite to make a rubbing of your image.

- 2) Ink method/

Ink up your block as usual and print it onto newsprint (following instructions under PRINTING section of this handout. If you are going to continue to make additional changes to the block, GHOST your block, and then dust with Baby powder, and wipe down.

PAPER

There are two main categories of papers, Eastern and Western. These designations refer to both the type of fiber used and the difference in method of creation.

Eastern Papers are those that were traditionally manufactured in China, Japan, Korea, Thailand and India. They are frequently misnamed "rice paper". Their fibers are native to these regions, plant fibers such as mulberry, kozo and gampi. Well-known brands like Masa, Kitakata and Hosho. These papers are thinner, and achieve their strength because they have a wide variety of fiber lengths. These papers are characteristically thin, and are great for relief printing, particularly if you are hand burnishing your block. Eastern papers were typically made using a flexible bamboo mould, and fibers were also held together with a natural glue called Neri.

Western Papers are those that traditionally came from Europe and later North America. Their fibers are native to their regions, and papers were comprised of flax, linen and cotton. When you see a reference to a paper being 100% RAG, it means it is a 100% cotton fiber. Typical brands include Rives, Arches, Stonehenge, Somerset. These papers are generally thicker than their eastern counterparts, and their strength comes from shorter fibers pressed together under pressure. These papers were typically made using a rigid mould and Deckle and then pressed. Wood pulp was developed later for making cheaper papers for example newsprint, but is not generally used for Fine Arts prints, as it has many impurities and yellows quickly.

INK

We use oil-based ink for relief printmaking. These inks are comprised of dry pigment and flax linseed oil. They do not produce fumes. Wear gloves to keep the ink off your skin, as combining with vegetable oil can create health issues via skin absorption.

We are using a variety of inks (Brands & Types) in this print studio. They include relief inks by (Daniel Smith, Gamblin, Caligo, Cranfield, Renaissance Graphic Arts, Speedball). Along with Etching inks by (Graphic Chemical, Gamblin) and Lithography inks (Hanco, Graphic Chemical)

We will also be using some ink modifiers. (See Handout: Ink Modifiers)



SAVING INK TIP:

After printing if you still have ink left over, scrap up the leftover ink into a pile and take a piece of either cellophane/wax paper or tin foil, and wrap your ink inside. It will keep for several weeks in this state.

COLOR TIP:

When working with color, try pre-mixing your ink in advance to the day your printing. Wrap your ink up and that way you can just come in and start printing with clean hands.

PREPARING TO PRINT

PAPER:

Tear down your paper in advance (while you have clean hands & always tear more paper than you need for the edition, you will lose some due to printing issues, your record gets better the more you print).

INK SLAB

Using an ink knife or stiff piece of cardboard, take a modest amount of ink out of the can or tube.

Using an ink knife, work the ink to loosen it up, and remove any dried bits of ink.

Select a brayer or roller to use.

Using your ink knife, lay out a ribbon of ink the same width as the brayer. Gently touch the ribbon with the brayer, then move down the glass ink palette and start to roll out the ink. Keep rolling back and forth, lifting the brayer periodically to let it spin and then repeat till the entire roller is covered. **DO NOT USE A FANNING MOTION, WHICH CREATES A LARGE SWATH OF INK** across the palette. The ink layer should be thick enough to cover the glass (lean) but not so thick that it develops an orange-peel texture. The sound should be smooth not, smacky. And the ink slab should have a thin velvety look to it.

As you print, you will need to re-charge the ink slab, by rolling the brayer into the bead of ink on the top of your slab and rolling it out smooth. You also need to re-roll (re-charge) the printing plate after every print.

ROLL UP

For small blocks, try placing a rubber matt under the block to prevent it from slipping on the glass palette.

As you begin to roll up your block, start with a lean brayer, make several passes over the block, going in several directions. Periodically re-charge your roller.

TIP:

It is better to make several passes with a very lean roller to ink up your block, than to use a lot of ink and try to roll it up quickly. The finer the detail, the leaner and more passes you will want to use to build up the ink layer.

TIP:

If your detail is filling in, you can use a dry red rag to wipe the excess ink out of the lines, and then re-ink. NOTE: that on very detailed images you may need to do this after every 1 or 2 prints you pull.

HAND Printing:

Eastern styled papers work much better for hand burnishing than western papers.

- 1- Lay inked block on registration guide.
- 2- Lay paper down.
- 3- Burnish using a baren, wooden spoon, drawer pull or intaglio burnisher. You should see the image coming through the back. Lift up an edge periodically to check your pressure and progress.
- 4- If the paper begins to fray or pill-up, lay a sheet of newsprint on top of the back of your paper to reduce friction.

TIP:

You have the ability to vary your pressure, creating tonal changes from light to dark, or creating line patterns.

PRESS Printing:

(reference your notes from Printing Demo & How to set the presses & safety)

Set the pressure of the press using the pressure sample blocks located on the rack on the wall.

There are several methods to printing relief with a press. I will review a few variations here, and would suggest you try a couple of them to see which works best with your block.

Gather your materials:

Newsprint, tympan, edition paper, registration guide etc.

PROOFING:

After the press has been set.

Place your registration guide on the press bed.

Next place your inked block in place on the guide and lay your paper on top. (USE NEWSPRINT to start with, as you are proofing your block to check ink and pressure. –See Trouble shooting handout and reference notes from demo for more specifics on what to look for.

PRESS PRINTING SET UP OPTIONS:

- Option A: Block/paper/newsprint/cardboard tympan/1 pusher felt
Option B: Block/paper/newsprint/Stiff cardboard tympan or Masonite and NO FELT, JUST TOP ROLLER
Option C: Block/paper (and print directly against the roller. (Make sure you know how to correctly set the pressure for this method as it can crush your block! if done wrong)

RUNNING THE EDITION:

Once you have pulled a good print, keep track of the number of passes with the brayer and how many times you re-charge it to keep your inking consistent.

CLEAN UP

Do not underestimate the time necessary to clean up.

Block:

1-Begin by “Ghosting” the block, this involves running the block through the press, and printing the excess ink onto newsprint a couple of times. Do this until you have a very light impression.

2-You can use a dry red rag and wipe off any remaining ink.

3-You can either store the block at this point, or dust it lightly with some baby powder, wiping it across the block with a rag. This adheres to the ink, and prevents it from setting.

WARNING: If you are using wood, NEVER clean your block with vegetable oil!!!! It will absorb into the wood, and expand the grain, and also eliminate your fine detail. Ghosting the block is enough, and wiping with a dry rag, even if you

plan to print in a different color later on. If you have very fine detail in the block, and want to clean off all excess ink, use mineral spirits, while wearing gloves and doing it under the ventilation vents in the back room.

If you are using linoleum or sintra plastic, you can clean off all the ink with vegetable oil, but keep in mind that areas that were clean, will now look stained. (But they shouldn't print).

Ink Slab & Brayers/rollers:

- 1-Begin by pouring a puddle of vegetable oil onto the slab.
- 2-Use your inky brayer to move it around the slab and coat the brayer as well.
- 3-Let all this sit for a few minutes.
- 4-Take some clean newsprint, and roll the brayer out on the newsprint several times, until you can see the color of the brayer.
- 5-Next take a rag with some vegetable oil on it and carefully finish cleaning off the excess ink on the rubber and the handle as well. Finish by spraying and wiping it with some simple green.

For the Slab:

- Take a used rag and wipe off the ink, which should be pretty loose by now.
Take a cleaner rag and finish wiping the slab.
Finish by taking a rag and simple green and wipe down the slab to eliminate greasiness of oil.

Press Bed:

Use oil and simple green to clean off any ink on press bed.

Put away your ink cans/tubes, brayers back on rack, rags in rag hampers and toss any newsprint.

REMEMBER, EVERYTIME YOU FORGET TO CLEAN UP, A KITTEN DIES ☹

