

Your First Relief Wood Carving

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Basic terms

Woods used in relief carving

How to transfer your pattern

Band saw cutting your blank

The basic tool kit

Five Stages of relief carving

Simple flower carving

Learning the Terms

The steps, techniques, and skills used in relief wood carving are easy to learn and will give years of satisfying rewards. In this book we will look at some of the common beginner techniques that you will use to create your own wood spirits, landscapes, signs, and wall decor.

Lets begin by looking at the words and terms used in relief wood carving.

Understanding the words used in any written set of instructions will make your first carving a more successful project.



Methods of relief carving

Four common methods of carving

Hand carving

This is my style of carving and the focus of our blog, LSIrish.com. The pressure that is applied to move the cutting tool comes from holding the tool in your hands. A two handed grip is the most common with one hand holding the handle, giving the pressure, and the fingers of the second hand guiding the tool along the cutting line.

Hand carving can be done in your workshop, rec room, and even watching TV with the family in the living room. You can work a soft wood as basswood on your lap or coffee table top.

Mallet carving

For harder woods and larger carving you may want to do mallet carving. The cutting tools for this style have heavier shafts and wider cutting profiles. The cutting tool is placed against the wood then hammered on the handle with a wood or leather mallet on the end of the tool handle to move the cutting edge. Mallet carving is sometimes referred to as Old World Carving.

Mallets come in several weights with heavier weights used to remove more wood or work hardwoods. The mallet is held with one hand and the carving tool the other. A carving that will use a mallet and tools needs to be secured to a work bench so that the carving blank does not move, walk, across the work surface. There are plans available on the net for carving tables, carving racks, and carving horses that are made specifically towards securing your relief carving during work.

Power carving

Power carving has come into its own as a specific style of wood carving in the last few decades. Small, high speed, hand-held power tools that use steel, ruby, diamond, and even titanium bits can be used for the three main steps of carving - rough out, shaping, and detailing. Higher quality cutting bits are more expensive, but still well within a hobbyist's budget and give a much finer, smoother finish.

Power carvings can leave a slightly rough texture if done with medium quality bits but can easily be dressed-out - smoothed - using hand carving tools and sand paper. While I am not a power carver I do keep one in my tool kit as it makes roughing out the first levels of a relief carving quick and easy.

Router carving

Wood working routers are great tools for those relief carvers that have a home workshop. The router can be set to a specific depth and used to drop each level of the pattern into the wood. There is a wide variety of router bits that make this task quick and easy. Once the rough out routing is complete the edges of each area can be rounded over either with a small bit or by hand to shape the elements of your pattern, turning your work into a low relief carving. You can also go to hand tools or mallet tools to create full 3-dimensional contours for a realistic effect.

Choosing your wood

Which wood you use for your relief carving is determined by the method of carving you will use, the purpose of the carving, and where the carving will be displayed.

For your first projects in relief carving I would strongly suggest basswood. With its fine, tight grain and clean white coloring it is the primary species for easy cutting, deep shaping, and fine line detailing. Basswood is perfect for letting you to learn how to use your tools and how to make your cuts. It is readily available at most large craft stores in both pre-routed plaques and in shapes as boxes, wall hearts, and even canister sets. Basswood, as any carving wood, can be purchased through mail order wood store in planed boards of varying thickness, widths, and lengths.

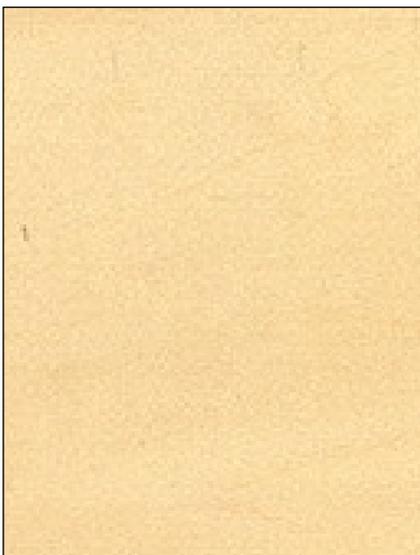
Butternut has a distinct tightly packed grain line with a silvery grey-brown tone. As basswood, butternut cuts smoothly with minimal pressure from your carving tools. This wood is available for purchase as planed boards and can be ordered through most mail order wood stores.

Sugar Pine is a beautiful wood surface to work. It has a fine, tight grain much like butternut and few heavy sapwood areas. As all pines it has a white coloring to the surface when freshly planed, but as the wood ages it will take on a golden-orange patina. Sugar pine should not be confused with the more common species of white pine.

English walnut, black walnut, maple, birch, and poplar are common woods used by relief wood carvers. These are all harder woods and require careful, controlled pressure when cutting. Yellow and red cedar are often used for outdoor use as signs or door plaques. Learn more about carving woods, visit [Woodcarving Basics](#).

Basswood

Although basswood is classified as a hardwood species, its tight, even grain cuts easily. It is a featureless wood that takes deep contoured carving, fine v-gouge detailing, and wood burned accents.



Butternut

The silver-grey coloring of butternut adds luster to any relief carving. It has a fine grain with deeper toned stripes of sapwood. Butternut is an excellent choice for any beginner's project.



White Pine

This common wood has thick, varying grain lines with heavy areas of sapwood. It takes careful control to work a relief carving through the grain lines and achieve an even, smooth look to your work.





Working with Patterns

Preparing the wood

Every carving project begins with a well prepared board. If you are working with planed wood do any cutting, glue-ups, and routing before you begin your carving steps. A smooth surface makes tracing your pattern easier and creates clearer traced lines.

Sand your board well using 220-grit sand paper to remove any fine lines, ridges, or rough areas left from the planing and routing stages. Remove any dust using a tack cloth.

Tracing your pattern

Center your pattern to the area on the wood where you want your carving. With several pieces of masking tape or transparent tape secure one side of the pattern paper.

Slide a sheet of transfer paper underneath the pattern paper. You can use typewriter carbon paper, ncr backed paper, and graphite paper for your transfer agent. Carbon paper will give you the strongest dark blue or black lines but can smudge as you move your hand across the wood surface. NCR paper (carbonless duplicating paper) makes fine but very pale blue lines. Graphite paper is my favorite with its thin medium gray lines and is available in sheets up to the size for a 4' x 8' piece of plywood.

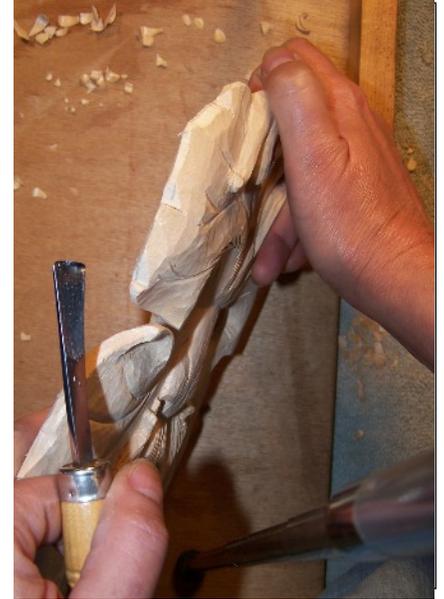
Use a colored ink pen - red or purple - to trace along your pattern lines using a medium, even pressure. Excess pressure can score the wood.

Trace only the basic outlines of your pattern. Any traced detailing lines will be lost almost immediately in the first rough out steps.

Learn more about [Working with Your Patterns](#).

Band saw cutting your wood

Many relief carving patterns are landscape styled scenes that require frame or plaque shaped wood. But some, as my Grapeman sample, can be cut out on your scroll saw, band saw, or by using a coping saw. Cutting your pattern shape lets you take your carving right to the very edge of the design.



Levels and layers with a relief pattern

Establishing levels in your patterns lets you drop each area of the pattern quickly to its depth during the rough out stage of carving.

Any relief pattern has areas within the design that fall at multiple depths in the wood. For this Greenman sample the nose is the highest area of the design, the mustache and beard fall below the nose, and the grape leaf falls even lower in the wood. To make the first stage of carving, called the rough out stage, easy you can divide your pattern into three to five simple levels and drop the wood in each of those sections to a predetermined depth.

I mark the highest level - any area that will remain at the original wood surface during the rough out - as #1. The mid-ground levels become #2 and #3, and the deeper areas #4. This places the lowest point of the carving as level #5.

Learn more about [Working with Levels](#).





From left to right - u-gouge, micro v-gouge, v-gouge, straight chisel, skew chisel, large round gouge, bull nose chisel, wide sweep gouge, bench knife.

Your tool kit

A bench knife is the most important tool you can own. Most bench knives have 1 1/4" to 1 3/4" long blades with one sharp cutting surface. The handle shape and thickness varies between brands.

I strongly suggest that you start with a basic beginner's set of five to six carving tools that will let you make every cut you need while inexpensive enough to keep your initial cost low. A mid-ranged quality set will cost around \$50.00 and will last a life time. A beginner's set of twelve tool tips and interchangeable handle begins around \$100. Higher quality tools begin around \$25 each and well worth every penny of your investment.

Most basic beginner sets include a 90 degree v-gouge, a straight chisel, a skew chisel, a large 3/8" round gouge and a 1/4" medium round gouge. These five tools will let you make any tool cut needed for relief carving.

As your love for relief carving grows you may want to add a few specialty carving tools to your kit. A favorite for me is the bull nose chisel which has a slightly round chisel edge, great for smoothing rough areas and background levels. A wide sweep round gouge has a low, wide curve to the cutting edge and removes large amounts of wood with each cut.

Beginner carving tool sets also are available in micro sizes with small sized cutting edges - 1/8" straight chisel, 1/8" v-gouge, and even an extremely small round gouge called a veining gouge or u-gouge.

Learn more about [Basic Carving Tools](#).

Five basic stages to relief carving

Every relief carving goes through five basic stages.

Rough out

The first stage is called the rough-out where you will drop each area or element of the pattern into the wood to a pre-determined depth. During this stage you are removing the excess wood from the board, exposing the basic shapes in your pattern. Larger profiled cutting tools are used to quickly drop each area of work. When you are finished this step the carving will literally look rough with many cut cuts and ridges showing. My favorite tools for the rough out stage are my large round gouge, wide sweep gouge, and bench knife.

Shaping

Next you will begin shaping each area of the design. This is when you add the contours, rolls, and under cuts in the carving as well as taper or blend one area into another and joining the intersection lines between areas. During this stage you begin removing the ridges left from the rough out stage. The straight chisel, skew chisel, and bull nose chisel are used during these steps.

Smoothing

The smoothing steps are worked with your bench knife, bull nose chisel, straight chisel, and the wide sweep gouge. Any of these tools can be laid at an angle close to the wood and used to remove thin slivers of wood - a technique called shaving. Shaving leaves very small flat planes across the surface creating an even, flowing surface.

Once you have an even surface you can use 220- and 320-grit sandpaper to give a pristine surface to your work. For tight corners or deep crevices try cutting foam core finger nail files to the size and shape that fits that area. Remove any sanding dust with a tact cloth.

Detailing

Fine cut details can be added to your relief carving using the v-gouge, u-gouge, or bench knife. During these steps the mustache and beard of our sample is divided into small clusters of v-gouge hairs, the veins of the leaves are added, and any crisp corners or edges are cut.

During the detailing stage I check the carving for any area that may need a little extra work to take a nice carving into a great carving. Check for double lines where you have used the v-gouge as in the leaf veins.

Finishing

Adding a finish to your carving adds color, luster, and longevity. Which finish you chose depends of which gives you the best results, and the final use of the carving. Craft and acrylic paints can be used to add coloring to your work. Brush on and spray polyurethane or acrylic sealers are easy to use and dry quickly. Oil finishes are a favorite of mine as they leave a soft luster while deepening the color of the wood.

For more information please visit [Joint Lines and Smoothing your Background](#).



Sharpening tools

Any carving kit will need a few basic sharpening stones. Shown in this photo, in the left hand column, are a red Japanese water stone with a white ceramic fine stone on top; a ceramic slip strop; and a wood slip strop with yellow stropping compound. To the right are a round white slip stone, a leather strop and red oxide rouge, and a synthetic strop with aluminium oxide compound.

Coarse sharpening stones which are used to create the bevel along the cutting edge are graded from 600 grit to 1000 grit and available in natural stone, man-made stone, and ceramic. Graded from 2000 to 6000 grit fine sharpening stones create the cutting edge.

For round gouges, wide sweep gouges, and bull nose chisels you will want to use a slip strop or a slip stone which has pre-made contours that fit the shape of your gouge.

The leather or synthetic strop used with honing or sharpening compound keeps the sharp, crisp edge developed during the fine stone work pristine. Rouging or sharpening compounds come in a variety of grits and most often noted by their color - green, red oxide, or yellow.

For more information on sharpening visit [Sharpening Bench Knives](#).



Basic tools and cuts

The bench knife is the primary tool for the relief wood carver.

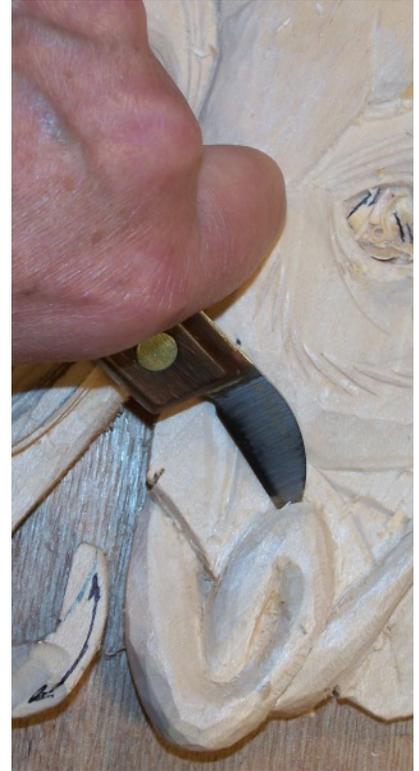
Bench knife

This straight blade tool is the primary cutting tool for the hand relief carver. Its cutting point can be used to create stop cuts, fine vein lines, and wrinkles in your Wood Spirits. The belly of the cutting blade can be used to shape and smooth any area.

Bench knives are available in several styles. A short, 1" to 1 1/4" blade set at an angle to the handle is called a chip carving knife, a favorite of mine. The short blade sets your cutting hand close to the wood, giving you more control over the cutting stroke. Many basic bench knives have a 1 1/4" to 1 3/4" long, narrow blade and are perfect for both relief carving and whittling projects. Large, 2" or longer blades, called Sloyd knives, can be used for relief carving, whittling, and wood preparation. Narrow bladed, fine point knives are called detail knives and made to cut thin free-form chip carving cuts and stop cuts in the wood.

The point of your bench knife should not be used to pop or pry a chip out of the wood blank. This can cause the tip to break. If a chip or cut stroke is not free from the wood re-cut with the bench knife along the line where the chip is still attached.

Good quality pocket knives are great for whittling but can not replace the bench knife in relief carving. The curvature of the pocket knife and the thickness of the blade can not cut thin, flat planes the way a bench knife can.



Freeing chips

The straight cutting edge of the bench knife can be used to release the chips created during the background rough out stage of work.



Detailing

Use the stop cut or v-cut to add fine line detailing to any area of your work.



Smoothing

By laying the blade of the bench knife as close to the wood as possible you can finely shave your round areas to a pristine smooth finish.



Stop Cut

Each tool has a specific purpose determined by the shape of the cutting edge.

To separate a high level area of the pattern from a lower level area you can use the stop cut. This is a two stroke cut made with the bench knife.

Place your bench knife on the pattern line, angle the blade slightly towards the area outside the line. Pull the stroke with even pressure making a shallow cut line. Lift the knife from the slice and re-position it at the beginning of the pattern line. This time angle the knife slightly towards the inside of the pattern area, pull the stroke. This will release a v-trough shaped slice of wood. For deep stop cuts you can re-cut this area several times, slowly dropping the trough to your desired depth.

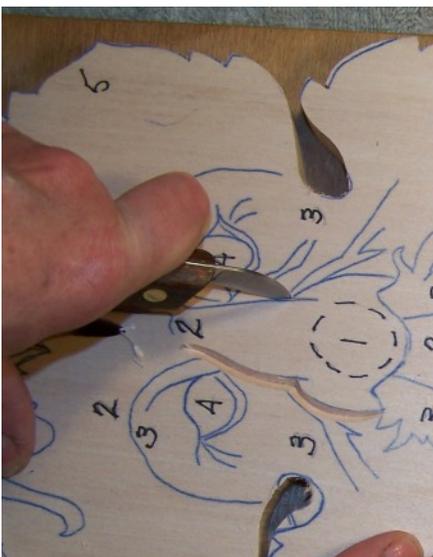
You can now use your round gouges to lower the background area, gliding the gouges into the stop cut. The stop cut literally stops the gouge from cutting the higher area, giving you control over the gouge cutting stroke.

Learn about [Stop Cuts in Relief Carving](#).



Stroke one

Angle the bench knife slightly away from the pattern line, towards the background area. Put the cut slowly, using even pressure on the knife blade.



Stroke two

Make a second cut, following the same pattern line, angled slightly towards the high area of the pattern. This will free a thin v-shaped slice of wood.



Gouge cuts

You can now lower the background area of wood using your round gouges, leading the cutting edge of the tool into the stop cut.





Round gouge curves

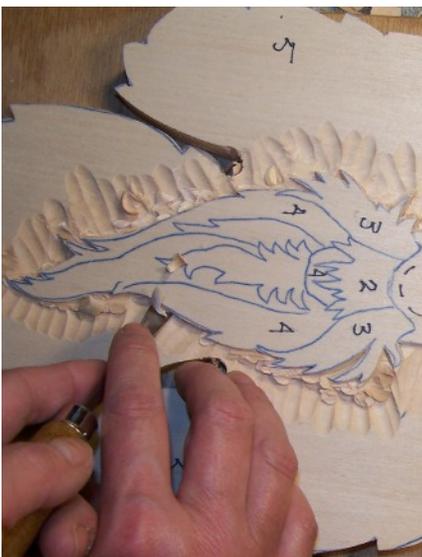
Round gouges come in a wide variety of curves, from very tight u-gouges to wide sweeps.

Round gouges move a lot of wood quickly leaving a concave curvature to the area you have worked. This makes them perfect for the rough out steps of your carving where you are dropping each area to its depth into the wood.

The large round gouge, often included in a beginner's tool set, has a half-circle profile and makes a deep, thick cut. Wide sweep gouges have a long, low curve that leave a gentle curve to the area. Small tightly curved rounds are called u-gouges and create a u-shaped trough, great for leaf veins and facial wrinkles.

Large round gouge

This large round gouge has a 3/8" wide cutting profile. It removes a large amount of wood with each cut as shown in this photo. By reworking the rough out area with the same gouge you can remove the high ridges left for the earlier strokes.



Wide sweep gouge

This 1/2" wide sweep gouge removes the wood quickly but also leaves few high ridges during the work. Often a wide sweep cutting follows the large round gouge rough out work.



Shaving with round gouges

Just the center point of the curve of the round gouge touches the wood. The more pressure you apply to the tool during the stroke the deeper the tool bites. Gentle, light pressure allows you to shave an area smooth.



V-Gouge

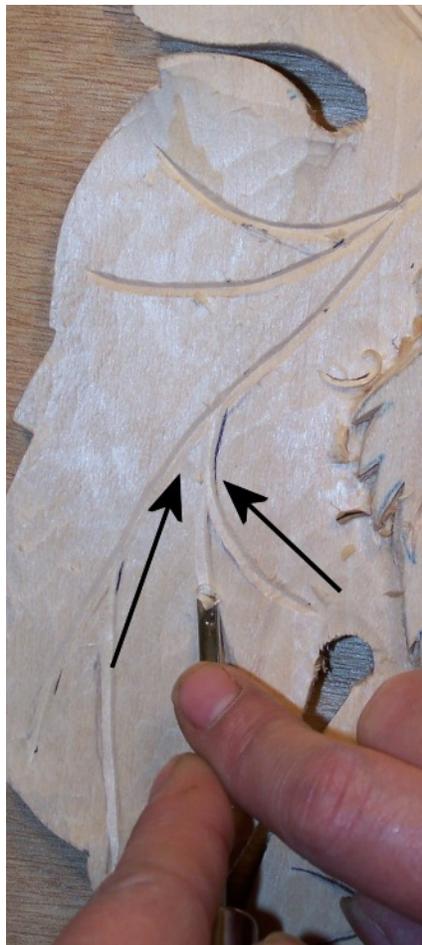
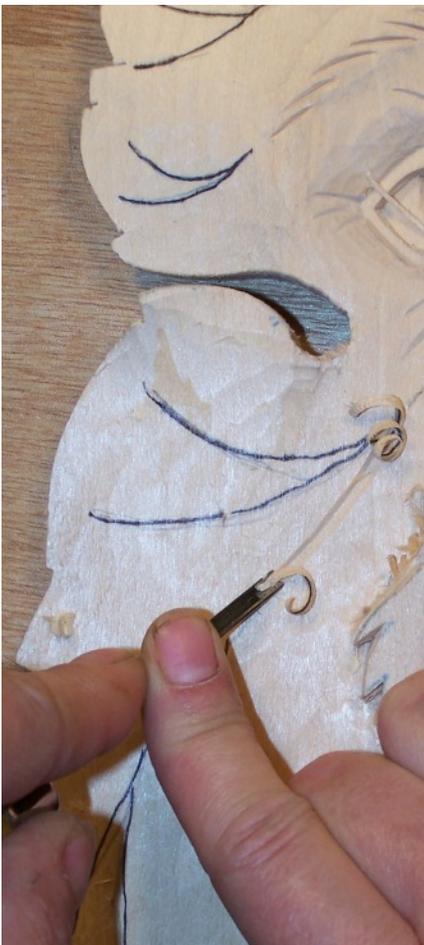
V-gouges have angled cutting edges that create v-shaped troughs.

The v-gouge has an angled cutting edge that cuts both sides of the v-shape trough in one pass. Tools vary in the size of the angle with some v-gouge making tight v-cuts and others very wide troughs.

Whenever possible work your v-gouge with the grain of the wood, leading up with the grain. This avoids the gouge from digging into the wood. You can make a v-trough cut using several strokes, each leading away from a central point towards the end of the line or both leading into a central point, depending of the grain direction.

The v-gouge can also be used to smooth the side walls of any area. Place the point of the v in the joint line and lean one side of the gouge against the high wall to make this cut.

V-gouges and round gouges use a slip strop for sharpening.



V-cuts

Thin v-shaped troughs can be cut to create the veins of your leaves or the detailed, individual hairs in your Wood Spirit.

Make several light pressure cuts to slowly lower the depth of your v-trough.

Chisels

The three basic styles of chisels are straight, skew, and bull nose.

Chisels have straight cutting edge profiles and are used primarily to round over and shape an area of your carving. The straight chisel's edge is at 90 degrees to the tool shaft; if the cutting edge is at 45 degrees it is called a skew chisel. The straight line of the cutting edge removes small flat planes of wood from the carving. A bull nose chisel, shown in the photo to the right, has a flat profile but the side edges are slightly rounded. This keeps the chisel edges from creating small cut lines during the stroke.

Placing the chisel with the flat side - back side - of the cutting edge against the wood leads the tool into a deep cut. Flip it over, with the angled top side of the tool against the wood, and you can create a very thin shaving cut.

Learn how to make your own [Bull Nose Chisel](#).



Back down chisel cuts

Laying the flat back of the cutting edge against the wood guides the cutting edge deeply into the area, giving you a thick cut. For rough out shaping.



Back up chisel cuts

Placing the angled front face of the chisel against the wood allows you to make thin, shaved cuts for smoothing the area.



Push cuts

Any chisel can be up-ended where a sharp straight line is needed. Hold the tool on the cutting edge and use a gentle push to create the cut.



Supplies:

Basswood practice board
Basic set of carving tools:
straight chisel
v-gouge
large round gouge
small round gouge
Bench knife
Graphite paper

Your First Carving Pattern

This simple flower, worked on a practice board, makes a great first pattern for your new craft.

The stop cut is made with two strokes to lift a v-trough of wood between two elements. In this sample carving the stop cut is used to separate the design from the background area, the leaves from the petals, and the petals from the center of the flower.

1. Secure your board to your work table with c-clamps, or with a non-slip mat.

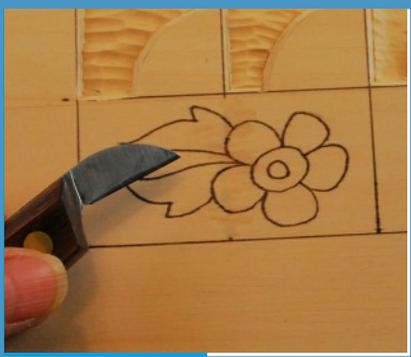
2. Lightly sand the board using 220-grit sandpaper.

3. Make a printed copy of your pattern. Center the pattern to the board and secure one edge with tape. Slide the graphite under the pattern paper. Using an ink pen trace along the pattern lines.

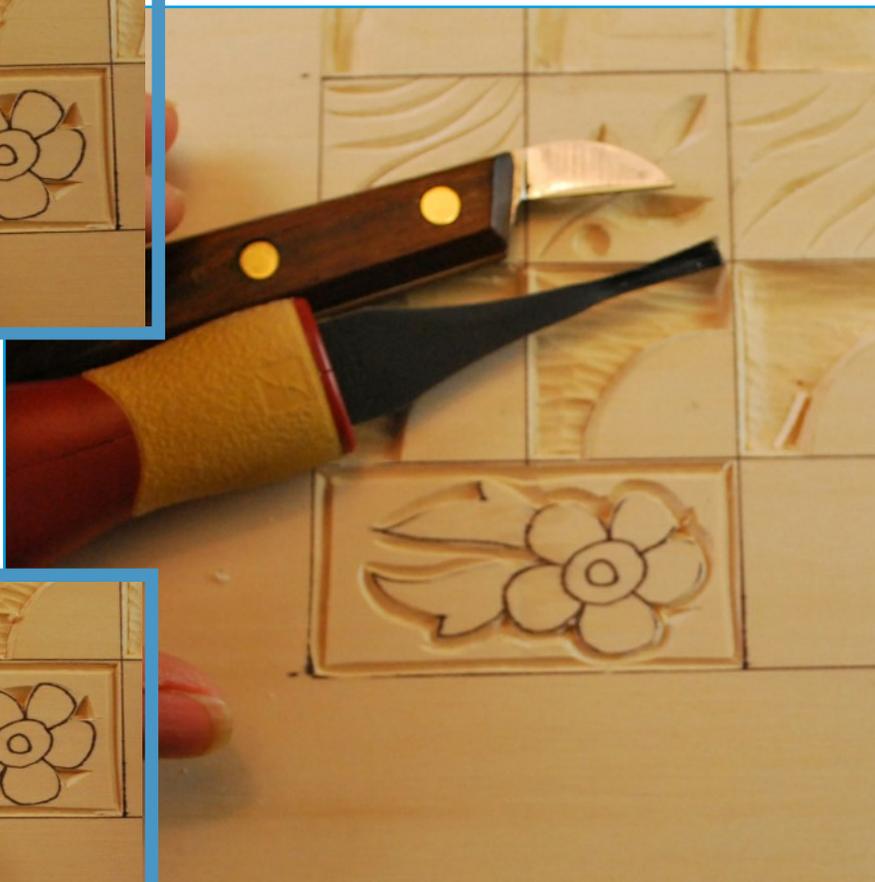
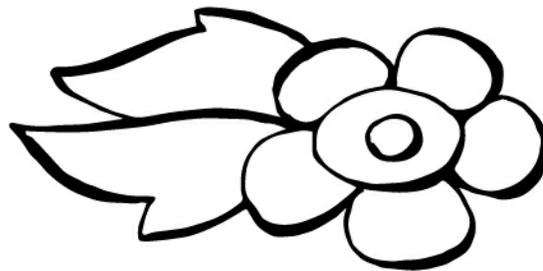
4. With your bench knife cut along the outer edges of the pattern lines at a 90 degree angle to the board.

5. Angle the bench knife slightly away from the pattern. Placing the knife point at the same place as the first cut make a second cut. This will lift a small v-trough of wood along the edge of the pattern.

6. Angle the knife to a 45 degree angle at the sharp corner areas of the pattern. Slice into the corner to lift a small triangle chip.



Sharp corners in your patterns can be lifted by using a three stroke cut called a chip carving cut. After the stop cut has been worked around each element of the pattern lay your knife at a low angle along the diagonal of the corner. Make a slice across the diagonal to lift a small triangular chip.



Your First Carving Pattern

The background to your pattern is next dropped to its level in the wood using a large round gouge, straight chisel, or as in our sample a small round gouge. You can work the background to a smooth finish or allow some of the cutting stroke ridges to remain to create a textured effect. The deeper you drop your background the more space you allow for your carved pattern.

As you work your round gouges to drop the background your cutting stroke will end at either the flower design or at your outer margins. With your bench knife cut the gouge sliver free using a 90 angle to the wood cut.

The v-gouge can also be used to create stop cuts. The v-angle of the tools cuts a v-trough in one stroke. Where the bench knife stop cut has vertical walls along the pattern lines, the v-gouge will leave a trough with 45 degree walls.

In any relief carving stop cuts will be made with both tools depending on the angle that you need in that area. I prefer the bench knife for deeper stop cuts. Stop cuts can be made in several stages - stop cut, lower the background, make a new deeper stop cut, lower the background again.

The straight chisel is used to shave the area into its shape. Placing the tool with the back of the cutting edge against the wood will make deep cut strokes. Working with the flat back of the tool edge facing up allows you to make thin shaving cuts.

7. With your small round gouge drop the background area to 1/8" - 1/4" below the surface of the wood. Work the gouge with the grain of the wood. Slide the round gouge from the background into the flower area, cut

the gouge sliver free using your bench knife at the edge of the flower.

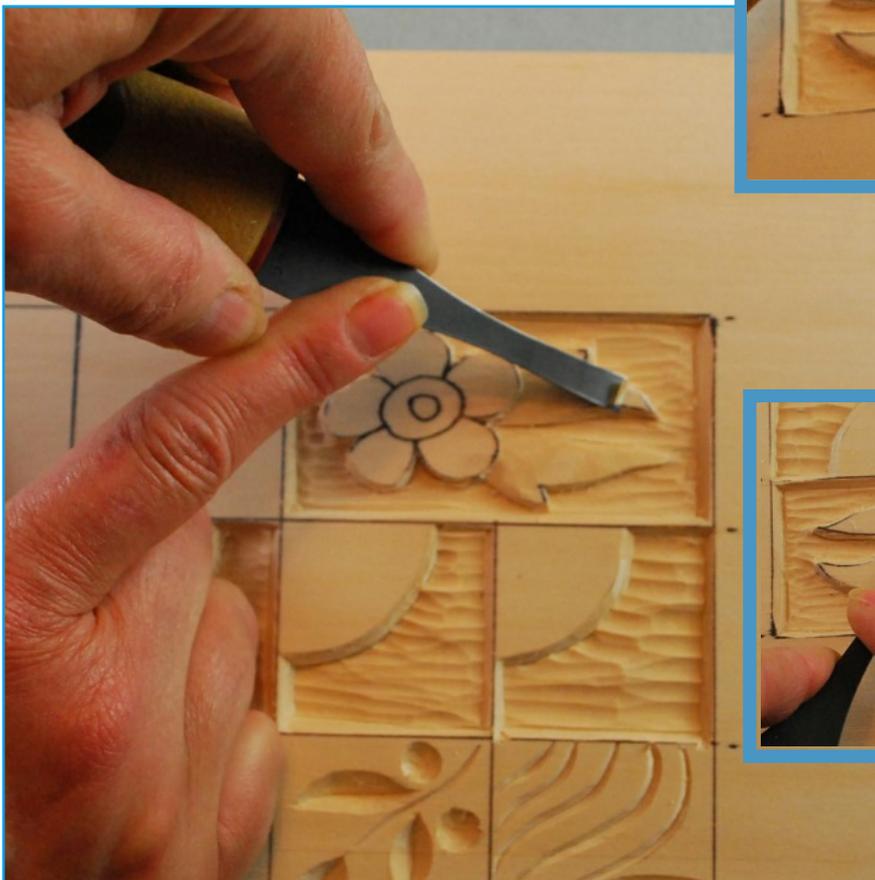


8. Use your bench knife to dress out (re-cut) along the edge of the flower petals and leaves.

9. Separate the leaves from the petals, cutting along the pattern lines with your v-gouge.



10. Using your straight chisel shape the leaves to curve away from the flower petals and to curve down at the leaf edges. Work this step with the grain of the wood whenever possible.



Your First Carving Pattern

11. Create a v-gouge stop cut to separate the petals and the flower center.

12. Using the small round gouge cut a bowl into the petals with the deepest point at the flower center. Free and lift the round gouge cuts with your bench knife.

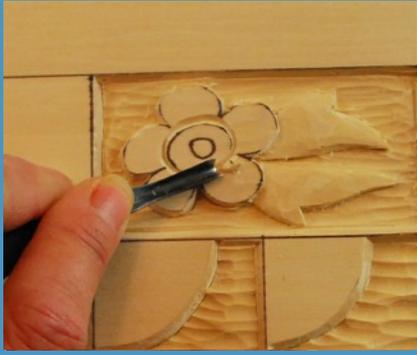
13. Upend your large round gouge and create a small inner bowl inside the flower center.

14. Curve and shape the outer edges of the petals using the straight chisel. Round over the outer edges of the flower center with the straight chisel.

The round gouges - small, large, and sweep - create concave cuts. For our simple flower the round gouge gives the center of each petal a small bowl indent that drops the petal below the flower center.

Cut this area first to drop the wood into the bowl shape then re-cut to remove the ridges left from the gouge work.

The straight chisel or skew chisel is used to round over the outer edges of the flower petals. Start these cuts along the outer edge of the petal where you made the stop cuts. Gradually move the chisel cuts toward the center of the flower to create a long, gentle roll to the petal edge.



Your First Carving Pattern

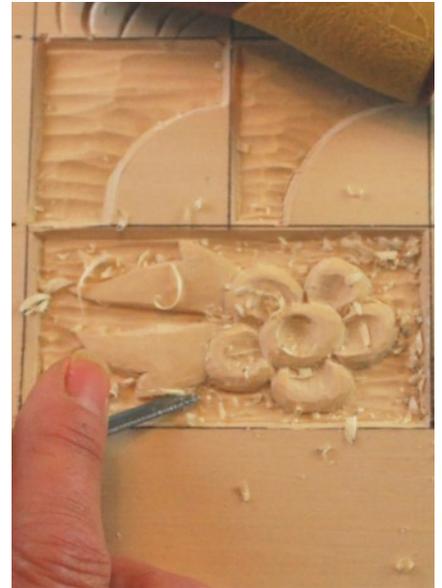
15. The final step in the carving process for this simple flower is to smooth the work. Smoothing is done by using the same tools that you used to make the cuts and repeating the cuts with light, soft pressure to shave each area.

You can, at this stage in your carving use 220-grit sandpaper to remove the last fine ridges left from the carving process. Remove the sanding dust with a tack cloth. Repeat using 320-grit sandpaper. Crumple an 8" square of brown paper bag. Briskly rub the crumbled paper over the carving to give it one last, extra fine sanding.

Your finished carving is of the low relief style, it has rounded edges and you can see the joint line area where one element of the carving touches another. Low relief is also called bas relief, a common carving style for stone work.

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Relief Wood Carving Canada Goose Project



This large oval basswood plaque features a flying Canada Goose drake who's wings literally lift off the background wood. Join L. S. Irish as she takes you through each step needed to complete the high relief carving, pyrography, and painting steps.

Canada Goose Relief Project, Part One

Learn how to prepare your basswood plaque, establish the cutting layers inside the design, trace the line art pattern, and rough cut the levels.

Canada Goose Relief Project, Part Two

Learn the step-by-step process of shaping each layer of the rough out stage, re-tracing the pattern steps, creating an undercut for high relief, and adding detail cuts.

Canada Goose Relief Project, Part Three

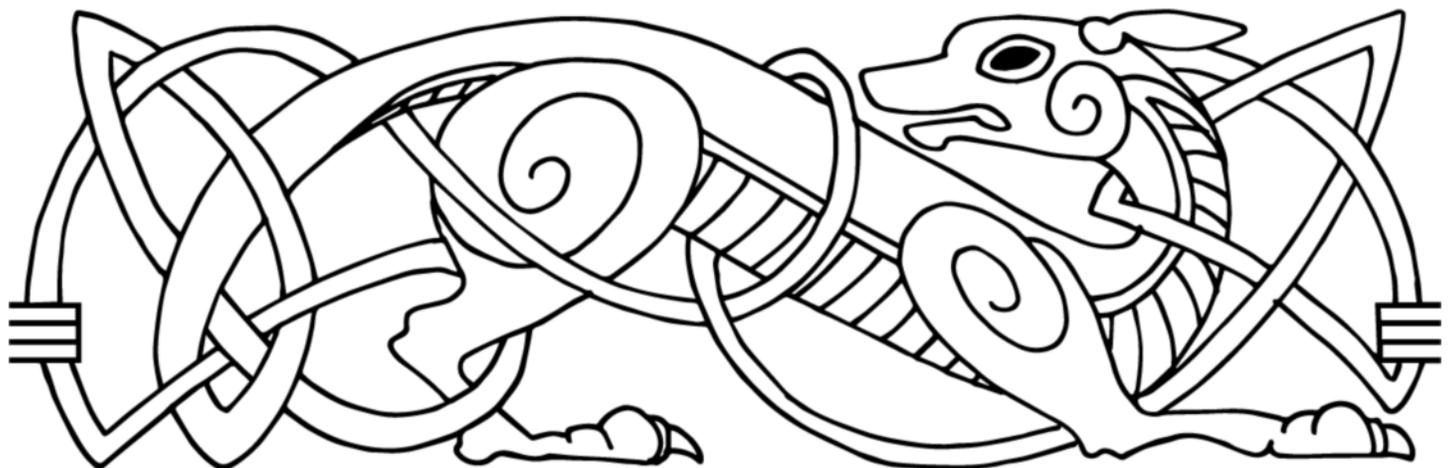
Learn how to wood burn your carvings to clean up rough carving areas, deepen an undercut, and added fine pyrography detail lines.

Canada Goose Relief Project, Part Four

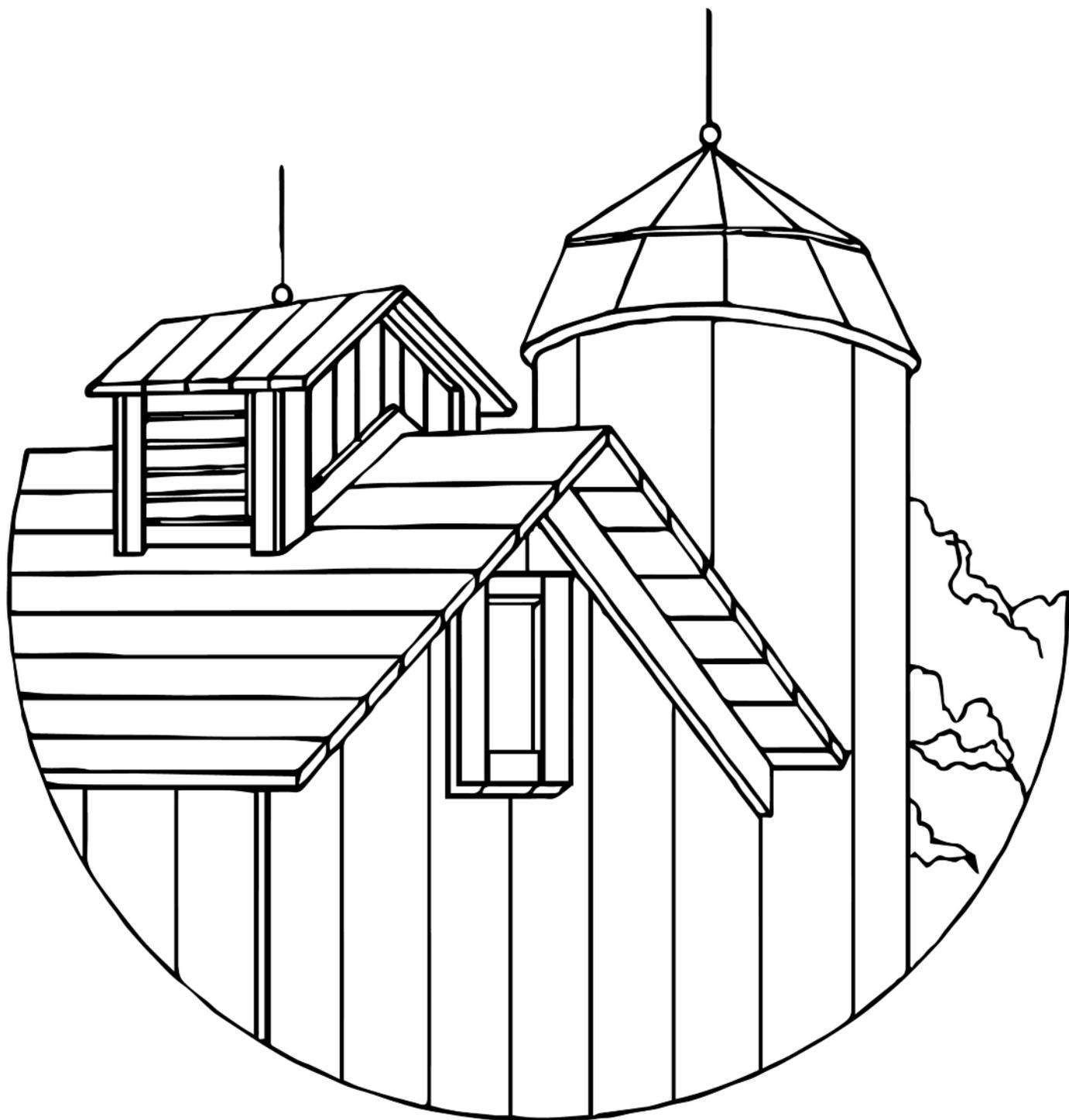
Learn how easy it can be to add acrylic painted details to your wood carvings.



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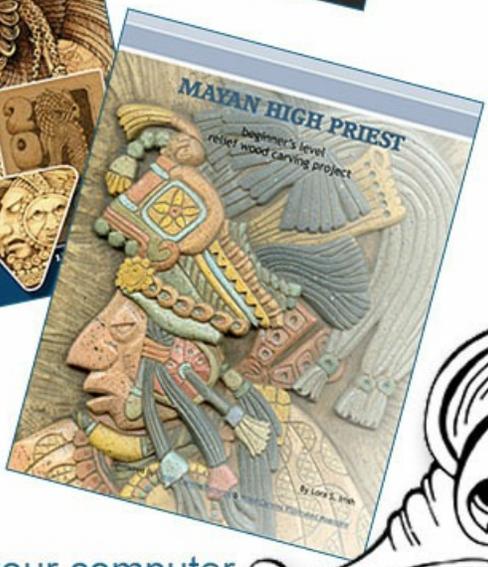
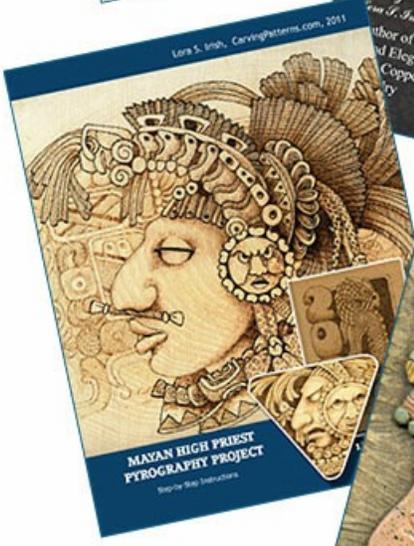
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