

MAKE IT YOURSELF
CRIBBAGE BOARD



*Skill Development:
Epoxy Resin Pouring and Drilling with a Template*



MAKE IT YOURSELF

Cribbage Board

#LVMadeByMe #LVLetsDoSomething

Skill Level: For adults, beginner to intermediate. Also appropriate for children 14 years and older when supervised by an adult.

Tip: The video and instruction booklet go hand in hand to both tutor and guide you through the steps. We suggest you watch the video first, especially if you are a visual person, and then read through the instructions before you start. At the very least, be sure to read all the product instructions to familiarize yourself with how to use each product. For best results, always follow the product directions and safety notifications.



Scan here to watch the video.

Time to Complete: 3 to 4 days, including 24 to 48 hours for drying and curing. Allow 1 to 2 hours on the first day, and 3 to 4 hours after the board has cured.

Tip: While the estimated time to complete this project is based on our tests, we encourage you to take your time. Savor the experience. Let the maker in you out to play. We want you to enjoy making your cribbage board.

Skill Development: Epoxy Resin Pouring and Drilling with a Template

You will use epoxy resin and an Ambrosia maple board to make a cribbage board. Since there are 367 holes to drill, this project will also provide you with the opportunity to develop your hand drilling skills with the use of a reusable plywood template. You can use any of the included colored pigments (just one or in combination) to your liking, or keep the resin clear. After sanding, a coat of Walrus Oil wood wax will give your cribbage board a soft, lustrous shine.

KIT CONTENTS

- Ambrosia maple board, dressed and approximately 14" × 3" × 3/4" thick
- Reusable silicone mold, 14" × 4" × 2" thick
- 300 ml Squid Art 2-part epoxy resin
- 3 Colored pigment powders (3 oz/85 g of each: black, blue and white)
- 5" Sanding block
- 7 Abranet 5" Sanding discs (one each of 80x, 120x, 180x, 220x, 320x, 400x, 600x)
- Pre-drilled plywood template, 14" × 4" × 1/8" thick
- 1/8" HSS twist drill bit
- 0.75 oz Walrus Oil wood wax
- Cotton rag
- Pair of vinyl gloves
- Reusable mixing cup, 1 U.S. Pint (16 fl. oz)
- Stir stick
- 9 Pegs (3 each of brass, black oxide and nickel plated)
- Deck of playing cards

Note: Our maple board has been planed on its faces, and these have been sanded to 80x to start you off with smooth surfaces.



Other items you might find helpful to have on hand (not included):

- Safety goggles
- Respirator
- Hand drill (with a fully charged battery)
- Orbital sander
- A small bowl of water
- 1/2 teaspoon (for measuring the pigment)
- Adhesive tape (e.g., masking tape, painter's tape)
- 2 to 4 small clamps
- A couple of spacers to elevate the board off your worksurface (e.g., slim dowels, chopsticks)
- Bumper feet or high-friction cushion pads
- Some weights to keep the wood from floating (e.g., bottled water, dumbbell)

Note: For the weights, do not use glass or metal as these will fuse with the epoxy, should they come into contact with the epoxy.

Tip: Feel free to use any other tools you have on hand that you think might be useful.



DAY 1: COVERS STEPS 1 TO 4, AND SHOULD TAKE APPROXIMATELY 1 TO 2 HOURS. ALLOW TO DRY AND CURE FOR 24 TWO 48 HOURS.

1 SETTING UP YOUR WORKSPACE

- a. Select a clean, open work area that is level and in a location where it can sit undisturbed for at least 24 hours.
- b. Remove the contents of the kit from the box and set them aside, but close at hand. Unfold the empty box (or any old box you have around the house) and place it on top of your worksurface to protect it.
- c. If you haven't done so already, read all the product instructions to familiarize yourself with how each product is to be used.

2 PREPARING THE MOLD

Note: While Ambrosia maple is highly coveted for many projects because of its one-of-a-kind coloration, it is not a tree species in and of itself. Since it is the result of an infestation by the wood-boring Ambrosia beetle, it is also known as wormy maple. The wood from a soft maple tree that is infested with this fungus-carrying beetle becomes discolored with gray, bluish, tan, brown and black streaks, adding character to the maple's traditional clean creamy color and plain grain. The affected wood can also expose a series of small wormholes or trails where the beetle bored through the wood to deposit larvae. There's no need to fear using this sought-after wood; the beetles have not caused any structural damage and have long since been evicted when the wood was put through the kiln drying process. This wood's unique grain character is sure to catch someone's attention.

- a. Rinse and dry the mold before use to make sure it is free of dust and debris.
- b. Decide which side of the board will be the top of your cribbage board. Place the maple board inside the mold, top side facing up. Make sure that the straight edges of the board are flush with the sides of the mold and that the bottom of the board sits on the bottom of the mold. The straight edges of the board should be positioned on either the far right or the far left of the mold. The board should not be centered in the middle of the mold.



- c. Set a few weights on the board to keep it from floating when you pour the epoxy. Leave the weights in place for the full cure time.



3 MIXING THE EPOXY



Caution: Epoxy resin is a moderately hazardous chemical. When working with epoxy resin, be sure to work in a well-ventilated area and wear a respirator, goggles and gloves. The epoxy resin comes premeasured to achieve the 2:1 mix ratio that is critical for proper cure. Be sure to follow the instructions on the product packaging. Keep an eye on the clock as you thoroughly blend the mixture for the amount of time indicated on the packaging (10 minutes). If the epoxy is not mixed thoroughly, it will take longer to cure (e.g., fully harden).

Note: The Squid Art epoxy resin two-part formulation is suitable for casting projects up to 1 1/2" thick. Easy to use, this clear, medium-viscosity, self-leveling casting resin can be tinted with colorant and provides a durable, high-gloss finish. This Canadian brand is certified organic. It is VOC free, solvent free and odor free. It is also non-flammable and certified FDA food safe once cured.

- a. Slip the vinyl gloves on and use the reusable mixing cup and stir stick to mix the premeasured two-part epoxy.
- b. Add the entire 200 ml contents of the resin into the cup first, then add the entire 100 ml contents of the hardener second.



- c. Vigorously stir the mixture for 10 minutes. Scrape the sides and bottom of the cup when mixing.
- d. Once the epoxy mixture is thoroughly blended, tap the mixing cup on your worksurface to release the air bubbles.

Tip: You may tint the epoxy after it is thoroughly blended with any of the coloring pigments that are included with the kit. How much you add depends on the desired effects. A pinch is about all you need to lightly color the epoxy. The more pigment you use, the darker the color. Start with a little, as a little goes a long way. Add more as needed to achieve the desired tone. For the volume of epoxy provided, 1/2 teaspoon will noticeably darken the epoxy.



4 POURING THE EPOXY

- a. To minimize air bubbles, slowly pour the prepared epoxy into the mold until it just reaches the top of the maple board, or barely below it. Wipe off any excess epoxy from the top of the board.



Caution: The fewer bubbles, the smoother the surface. Because you will have to drill into the epoxy in step 7, do not add any objects into the epoxy; otherwise, you will not be able to drill in those areas.

Note: You may not need to use all of the mixture. Keep in mind that if you over-pour the epoxy to the point that it spreads over the board, you will have more sanding to do. It's easier to sand the wood than to sand the epoxy.

- b. Leave the mold undisturbed on the worksurface and allow the epoxy to cure for approximately 24 to 48 hours. Do not remove the weights or move the mold from the worksurface.

Note: Curing time will mostly depend on how well the epoxy and hardener were mixed together. Under mixing will result in a longer cure time. The epoxy may not harden at all if the two parts were given only a quick stir. After 24 hours, if the epoxy still feels tacky or sticky, let it cure for another 24 hours or so. Do not remove the weights.

- c. Let the remaining epoxy cure in the cup, then release it and dispose in your garbage (in accordance with local regulations). The mixing cup is reusable.



END OF DAY 1

*DAY 2: COVERS STEP 5 TO 10,
AND SHOULD TAKE 3 TO 4 HOURS.*

5 RELEASING THE EPOXIED BOARD FROM THE MOLD

- Ensure that the epoxy resin is completely set. If it still feels sticky, let it cure for another 24 hours. (Do not remove the weights.) If it feels dry, then the epoxied board is ready to be released from the mold.
- Remove the weights.



- c. Pull the sidewalls of the mold away from the epoxied board, then invert the mold onto your worksurface. Press lightly to release the board.



6 LEVELLING THE SURFACE



Note: The 5" sanding block is shaped to fit the hand for a comfortable grip, reducing hand strain during extended use. It has a hook facing that attaches to the loop backing of the 5" sanding discs supplied in the kit. It allows even use of the entire disc surface when sanding by hand, without introducing creases by folding or wrapping the disc around a form. If you have an orbital sander, you may use it instead of the sanding block provided for levelling and sanding the surfaces; the included sanding discs are compatible for use with 5" orbital sanders.



Caution: The wood and the epoxy are going to create a lot of dust. Be sure to wear a mask when sanding to reduce the risk of developing respiratory problems.

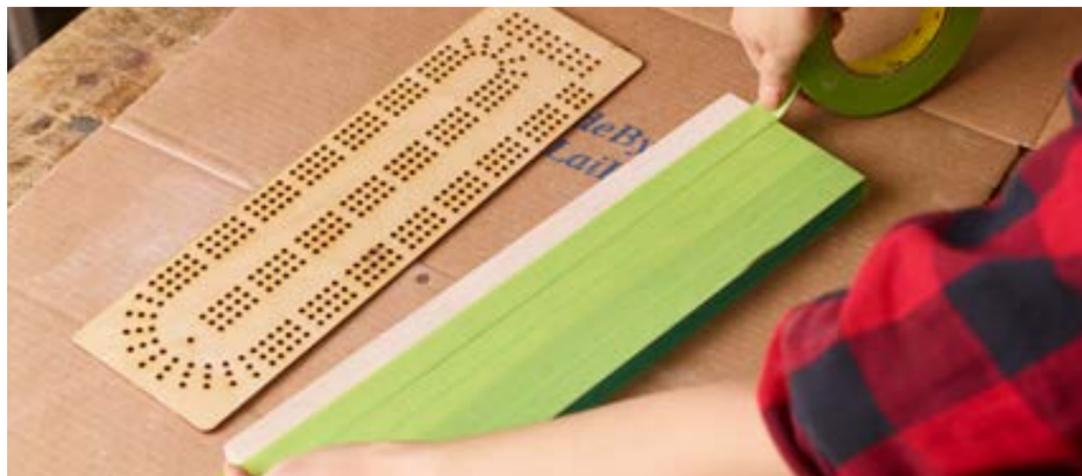
- a. With the 80x sanding disc attached to the sanding block, begin by sanding the front of the board along its length until the epoxy is level with the wood.

Tip: The first grit – 80x – is for rough sanding. Use it to bring the epoxied side flush with the wood and to flatten the entire surface. Take your time with this first sanding step. If you have an orbital sander, you can use it instead of the sanding block for the sanding steps.

- b. Sand the right half of the board, then flip it end for end to sand the left half.
- c. Flip the board over, and sand the back of the board the same way as the front.
- d. Sand until the surfaces are as level as possible (about 5 minutes by hand).

7 DRILLING THE HOLES WITH THE TEMPLATE

- a. Center the template on the epoxied board and secure in place with adhesive tape. (You can use small clamps if you have them to secure the board to a worksurface so that you have both hands free to hold the drill.)



Note: There are a lot of holes to drill. 367 of them. The reusable plywood template is a great assist for drilling repeatable 90° holes in sequence. It replaces the need for a drilling jig. To ensure consistent drilling and prevent the wood from splintering, you want to make sure the template is well taped to the epoxied surface. To drill clean holes free of tears, run the drill at full speed, avoid putting pressure on the drill and let the bit do the work. Covering the board with adhesive tape before securing the template provides another preventative measure against splintering.

Tip: The polished flutes on the drill bit give superior chip clearance. Nevertheless, when drilling many holes in sequence, be sure to clear out the swarf; back out the drill often and check that the flutes are clear of wood chips before drilling the next hole. Keep in mind that the drill bit may be hot to the touch, so do let the drill bit cool before clearing the wood chips.



- b. Install the 1/8" drill bit in a drill. Make sure to fully tighten the bit in the drill chuck and that it is straight; otherwise, the bit may break as you drill.

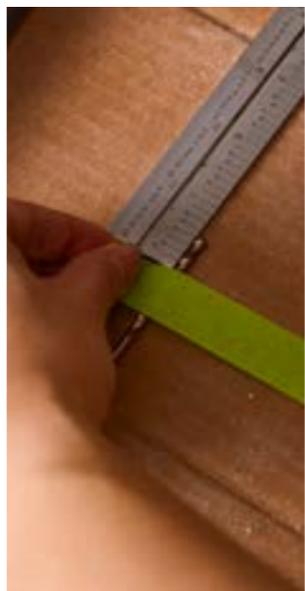
Tip: Wrap a piece of masking or painter's tape 5/8" above the tip of the bit and around the shaft. This will serve as a depth stop so that all the holes will be the same depth. You can wrap the tape around the bit such that it leaves a bit of a tail, which will sweep away the wood chips as you drill.

Since there are so many holes to drill, keep an eye on the tape to make sure it hasn't slipped out of place and replace it as required (e.g., it comes off, it's so worn that you can't see it).

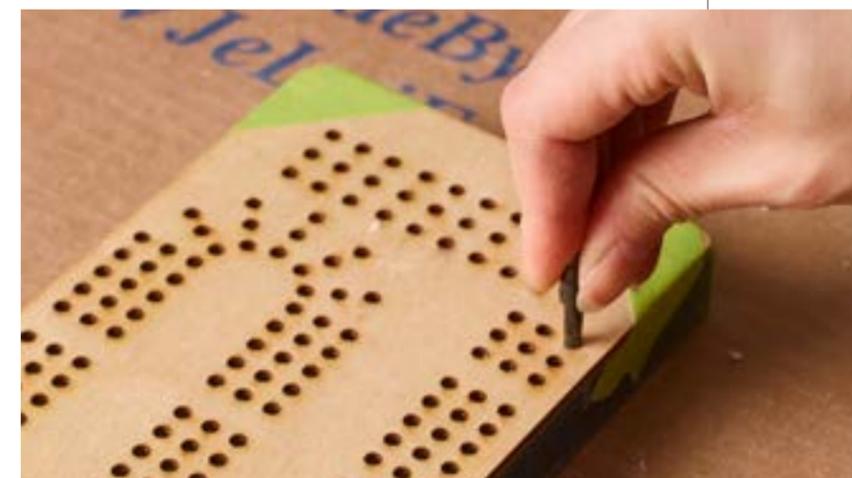
The tape depth stop will also ensure that you do not inadvertently go through the board. In the event that you do drill through the board, you shouldn't worry too much about that. The cribbage board will still work as intended and a few through holes won't impact how the game is played. What the through holes will do; however, is provide the evidence you may need to attest that you made the cribbage board yourself, should anyone challenge you on the matter.



Caution: Always wear proper eye protection when drilling.



- c. Begin by drilling a hole in one of the holes on the bottom left-hand side of the template. Place one of the pegs in the hole to anchor the template in position. Drill another hole in one of the holes in the upper right-hand side of the template, then insert another peg into that hole. You can leave it at that, or drill two other holes: one in the upper left-hand side, another in the lower right-hand side. This way, should the tape come loose, the template will remain in place as you drill.
- d. Proceed to drill the remaining holes. Working one row at a time helps with alignment. When you get near one of the pegs, simply move the peg over one hole to ensure you have clear access to the hole you need to drill.



8 SANDING THE SURFACES



Caution: The wood and the epoxy are going to create a lot of dust. Be sure to wear a mask when sanding to reduce the risk of developing respiratory problems.

Tip: Why do I need to do so much sanding? Each of the sanding discs included in the kit have different grits, or surface roughness, labelled as 80x, 120x, 180x, 220x, 320x, 400x and 600x. The 80x sanding disc is the coarsest of them all and is used for rough sanding. Use it to eliminate mill marks and to flatten the surface. Take your time with this first sanding step. And don't be tempted to skip the 120x or the 320x or go straight to using the 600x. After sanding with the 80x disc, use the 120x and repeat the sanding step. The 120x will create new scratch marks, but those will be smaller than the board as it was received. Continue sanding using the next grit in sequence from coarse to fine (180x, 220x, 320x, 400x and 600x). Before sanding with the final grit (600x), it's a good idea to raise the grain. This step is particularly beneficial when using water-based finishes, but is a good practice generally. The sanding steps tear the wood fibers at a minute level, and raising the grain makes them stand up so you can cut them back to the surface with a fine grit.



- a. Begin with the 80x sanding disc. Sand the drilled surface along its length, in the direction of the grain, to clear all the raised fibers, then sand the sides and ends.
- b. Finish this step by rounding the sharp corners of all eight square edges of the board with the 80x sanding disc. Sand just until the edges are slightly rounded to remove the sharpness.
- c. Switch to the 120x sanding disc. Sand the end grain and the sides. Sand the right half of the board, then flip it end for end to sand the left half. Flip the board over, and sand the back of the board the same way as the front. Use long smooth strokes and sand until all the surfaces are smooth.
- d. Repeat the sanding step using the next grit in sequence (180x, 220x, 320x and 400x), wiping with a dry cloth between grits.
- e. After sanding with the 400x disc, wipe the entire board, including the front and back, sides and ends, with a lightly dampened cotton rag. This will expand the fibers and raise the grain slightly. Let the water evaporate for approximately 10 to 15 minutes.
- f. When the board is dry to the touch, proceed with sanding the board with the 600x disc. As per the previous sanding steps, begin with the ends, followed by the sides, then the front and the back. Use a dry piece of the cotton rag to remove the sanding dust.



9 APPLYING THE FINISH

- a. Elevate the board with a couple of spacers. You can use whatever you have on hand, e.g., slim dowels or chopsticks.
- b. Use a clean, dry rag to apply a thin coat of the Walrus Oil wood wax all over the board: the front and back, edges and ends. Apply the wax sparingly; a little goes a long way. Too much, and the wax might clog the holes.

Note: For many woodworkers, the application of the finishing wax is the most satisfying step. The finish brings out the natural beauty of the wood and often reveals some characteristics that were previously hidden. Take a moment to let that sink in – both literally and figuratively. There’s something quite delightful about watching the wood grain come alive right before your eyes.

- c. Place the waxed board on the spacers and allow the wax to dry for 15 minutes or so, then buff to a shine in the direction of the grain with the cotton rag.



10 FINAL TOUCHES



- a. If desired, you can add bumper feet to the underside of the board.
- b. Park the pegs in the start area on the board, shuffle your cards, and start playing.



Scan for cribbage playing instructions.

NOW WHAT?

The tools and supplies in this kit are reusable. We hope that you will be inspired to make more projects where you can apply this epoxy pouring technique. All you need is another board and more epoxy resin.

You can reuse the mold with a wooden board of your choice and more epoxy to make a mini cheese board or a set of coasters. Follow the same steps for the cribbage board, only you will not be drilling any holes. If you are making a set of coasters, you will need to cut them to size after the epoxy has cured and before final sanding.

You can reassemble the box and store the tools and supplies in it so you know where to find them when the need for them arises. The more you make, the more the tools will be of continued service.



CREATED BY LEE VALLEY. MADE BY ME.

Now that you have completed your project, we would love to hear about your experience and see the finished project.

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Lee Valley Tools Ltd. Ottawa ON K2H 1C2 Canada leevalley.com

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