

Notes on Moravian Star - 8 Point

The Moravian Star is a great geometry practice project, and uses a number of different knife cuts. Some instructions use the extra lines as shown on the right face (Figure 1), but they're not 100% necessary**.

Start with a cube of your wood choice. A soft wood is suggested, like basswood or butternut, unless you're tackling the project with power tools - then use whatever you like. Draw an X on each face of the cube, connecting your corners.

The whole star is created by removing triangles of material from each edge. On Figure 2, the blue shaded triangles would be removed at the same time (Two triangles connected by the hypotenuse. Not the hippopotamus. That's something different.) As you cut into the edge of the block, you will be either making stop-cuts and connecting push / pull cuts, or just alternating push / pull cuts.

**This is where the extra lines come in. If you add in extra lines that bisect the block into quarters (a + shape across each face), you can make a stop cut along this midline, and cut out half of a triangle at a time. Again, it's not necessary, and does take more time using this style. The end result is the same.

Take care to not cut past your pattern lines, as you won't get the nice sharp edges on your star. As you move your cube around and examine each removed triangle, check to see that there isn't a hump of wood in the center. It's easy to miss as you carefully cut down to each of the triangle pattern lines, rocking your blade back and forth. Just take a few extra passes along the middle of each triangle leg to flatten out the hump (Figure 3).

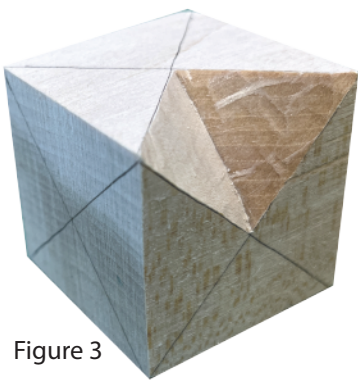


Figure 3

Then - move on to the next cube edge! You will repeat this process TWELVE times by the end. You may want to slightly flatten one point to add a small eyehook for hanging.

Grain direction notes (Figure 4): With standard wood, not burl, four of your sides will cut into the side of the grain. These four sides will probably feel the easiest as you slice your way down. On these sides, make sure to only point your sharpened blade edge towards the middle of your block (green arrows) - only cut down. If you reverse the blade to try and sharpen up one of your points, you may accidentally catch on the grain, and lose a whole end. The grain here runs the length of the edge, so cutting "downhill" is from the outside corners to the middle of the block (right and left side of Figure 4).

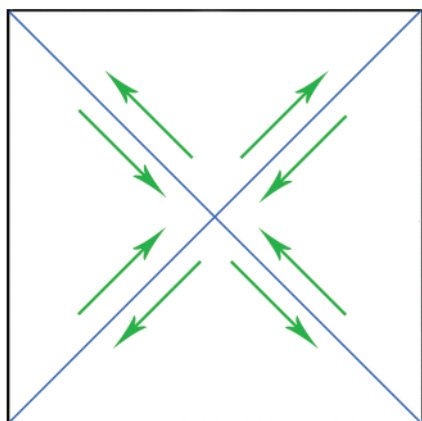


Figure 4

Eight of your sides will be partially into end-grain, and may fight a clean cut. These areas you can cut down into the wood, towards the center - AND reverse your blade to clean up any of your outer points. Because the grain is perpendicular to the edge, cutting "downhill" is actually from the middle of your block to the outside corners (top and bottom sides of Figure 4).

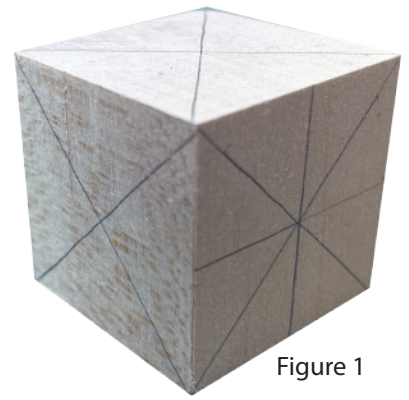


Figure 1

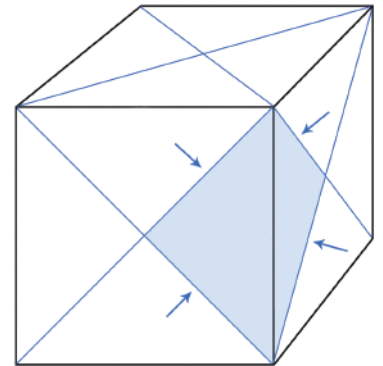


Figure 2

