

I've consolidated the questions submitted, several were similar, and attached a chart which I got at the Wood Show several years back from Ron Brown. It gives many good pieces of advice as well as insights and answers to some of the questions. I will fill in my answers and opinions. The truth is, practice and learning from one's mistakes makes the difference.

Beginners' Corner April 2017

Questions submitted:

- **What would you consider the basic tools needed to get started:** For me the decision starts with what you want to make; why invest in a bowl gouge if you are never going to make bowls. However, most starter sets come with a bowl gouge and the set is usually cheaper than buying the individual tools. The basic tools needed are Spindle Roughing Gouge, recommend 1", the Spindle Gouge, recommend 3/8" or 1/2", the Parting tool, recommend 1/8", the Skew, recommend 3/4" or 1", the Bowl Gouge, recommend 1/2", and the Round Nose Scraper, recommend 3/4".
- **Is there anything different needed for bowls vs spindles vs hollow forms vs pens:** The first four tools listed above are necessary for spindle work with the scraper added for smoothing end grain hollowing of boxes, goblets, etc. A bowl gouge is necessary for bowls; it has the thicker steel shaft and strength to go down in and hollow out the bowl. Pens can be done with the basic spindle tools, they are a basic spindle form; you need the other pen specific implements (mandrel, drill for tubes, pen press, etc.) to complete. Hollow forms are different and depending on how narrow an opening you leave at the top to hollow through dictates the size and type of tools needed. Some hollowing can be done with the scraper or the spindle gouge, like a goblet or a box, but if you have a deep vessel and/or a neck or small opening to go through it requires specific cutters or hooked tools to hollow the inside.
- **Can you describe what the various lathe accessories are and how they are used in various projects. Example- what is a live center is when is it used-----what are chucks and what is their purpose-----when should you use a faceplate:** A live center goes in the tail stock assembly of the lathe and is used to help stabilize the wood between centers in a spindle configuration. They are called live centers because most have ball bearings and rotate with the piece as opposed to the old tail stock centers which didn't rotate and burned a circle in the end of the wood.
- **Faceplate:** Faceplate is used in bowl turning. Modern chucks made faceplates less convenient but they still can be used. Problem is you lose a distance from the bottom of the wood piece where you mount the faceplate because the screws go into the wood; you must plan the shape of you piece accordingly. Faceplates can be used with waste blocks, scrap block of wood screwed to the faceplate, and the piece can be glued to the waste block; again the same precaution about cutting into the area of the waste block with the screws.
- **Not sure how to use a chuck; expand vs hold; which/when/why:** Chucks provide the strength to hold the wood on the lathe, though it sometimes still flies off. Clamping or closing the jaws on a spigot or foot is the usual method; the keys being that the bottom or the groove and edge of the spigot are flat, the angle of the bottom to the spigot is 90 degrees (it can be slightly under cut), and that the spigot does not bottom out, touch, the bottom of the chuck. These are key to getting a good tight fit to keep the wood from flying. Expanding the chuck, I'm told, is stronger than clamping. Same principles apply, flat bottom, 90 degrees. Expanding is used form plates and platters where you want a larger flat foot on the piece. The size and depth of the spigot depends on how adventurous you are and the size/weight of the piece of wood; usually 1/4' to 3/8", maybe bigger on heavy pieces as long as the spigot doesn't bottom out (touch the bottom of the chuck).

- Waste block- what is it; when to use one; how big to make it; what type of wood to use or not use:**
 As before, a waste block is a sacrificial piece of wood either screwed to the faceplate or it can be a piece that has a spigot fitted for the chuck to which you glue the project to turn. Size depends on the size of the project, though usually not smaller than 3" across and the thickness depends on how many times you plan to use (how deep you plan to cut into the waste block). The wood should be stable, dry stock, and I prefer solid wood as opposed to plywood. Plywood can be used and it is very stable, but when you start cutting into it to get to the bottom of the project you chance hitting a void and the wood flying. Baltic Birch plywood has no voids but is too expensive in my opinion for sacrifice. Green wood (wet wood) can be used as a short, one time use, but gluing can be a problem because of the moisture and wet wood will warp, so it won't be true a second time.
- What speed to run the lathe?:** Depends on the size/mass of the wood and the orientation. General rule is size (diameter of wood) x speed (RPM) = 6000 to 9000. Smaller the piece, the faster you can spin it. But comfort is a factor; if you are uncomfortable standing there with a fast turning object, turn the speed down to a comfortable level. The faster you go, the faster/bigger the mistake if you make an error. Generally I turn bowls between 300 and 600, spindles and finials 500 to 900, and I slow the lathe to 300 to 400 to sand (allows the sandpaper to work and doesn't burnish the wood).
- Sharpening: what do you need :** Three things: A grinder, a jig or sharpening system, and patience. 8" or 10" grinders are the most common, though any will do. Newer grinders are low-speed/variable speed which don't create as much heat which can take the temper out of older steel tools; newer High-speed steel tools are harder and more difficult to get hot enough to remove temper. Grinder wheels can be stone or new composite, steel with diamond compound surface, depending on how much you want to spend. Then your decision is to free hand sharpen or jig. You will still need to develop a jig if you free hand sharpen to help you with certain tools. The key to sharpening and ultimately a good cut is consistently getting a single facet and sharp edge; a sharpening system helps. I use the Wolverine system which allows me to get that consistent sharp edge. Then it is patience and practice.
- Bowl gouges-best way to introduce bowl gouge when hollowing-out a bowl to avoid catching:** Hard to verbalize, best to show, but it boils down to the same as any tool, Ancor, Bevel, Cut. Point the nose of the tool the direction you want to parallel the profile of the outside of the bowl and slowly and smoothly push the tool into the wood. Realize that the wood farther down in the bowl is spinning slower (smaller circumference) so you gradually slow your pace as you get closer to the bottom. You also slowly rotate the tool as you progress toward the bottom. Start slow, small cuts, not trying to take a large bite in the wood. On unsymmetrical surfaces, go slow; as the surface becomes symmetrical the cuts will become smoother and you can increase the speed. As you get close to finish of hollowing, insure you point the bevel on the inside parallel to the outside profile. Take a fine final finish cut from the rim to the bottom, no stopping. You can clean up end grain tear outs with a scraper; very light, very delicate cuts.
- How to use a skew:** Patience and practice. It must be razor sharp with a smooth bevel or that and cause you problems. Again, ABC applies, even more so because the skew is unforgiving. I've found the 3/4" skew is easier for me to use (don't know why). Start slow, anchor, bevel, raise the handle, look for shavings in the lower third of the cutting edge, then cut. Start with flat surfaces to gain confidence; learn to go left and right using both hands. When you get confidence, try making beads; start at top, same as gouge, and rotate tool to ride the bevel. Patience and practice.
- Pro and cons of carbide tip turning tools; (Easy Tools????):** Carbide tips last longer, but are more expensive and more difficult to sharpen when dull. Most carbide cutters are on hollowing tools. Easy Tools are good; must use correctly to maximize efficiency. Unlike other cutting tools (skew, gouges) where you rotate tool to maintain bevel contact, Easy tools are used straight in, parallel to lathe bed, perpendicular to wood piece, to maximize cutting efficiency. I use Easy Tool sometimes to remove large masses of wood from bowls or hollow forms.

Wood questions:

- 1. How best to store logs? Different woods different ways? Does the size make a difference in storing?:** My success in storing wood in good to poor. My problem is I have more wood waiting to be turned than I have time to turn, I always take more than I can actually use. My experience is that size really doesn't make a difference, larger logs and smaller branches crack about at the same rate (branches maybe a little faster). Sealing the end grain and a few inches back on the side grain with green wood sealer, Anchor Seal, or wax, slows the process of the water leaving the log. I've found that if I cut the log in half, down the center or the pith, and then seal, the wood will not split as soon; cutting relieves the stress of the log and allows some movement as the water leaves. The rule is water leaves the log at a rate of 1" of thickness per year; so a 10" length of log, cut at both ends, would take 5 plus years to dry (that's dependent of other conditions, weather, humidity, air movement across, etc.) I store most logs outside and those I've cut for bowl blanks inside, on shelves.
- 2. What is the best method to seal wood; why do you need to seal:** I mentioned above, Anchor Seal, green wood sealer, available at woodworking stores or online. Sealing the wood ends slows the water exiting the wood; the faster the water exits the quicker the wood will crack.
- 3. Green wood vs dry wood turning; when should each be used (or not used):** If I have a preference I would always choose green wood. Green wood is more fun, like peeling an apple and watching the curls fly. It is also cooler and easier on the tool; tools will hold an edge a little longer. Wet wood has its hazards; throwing water on you and others watching and sawdust tends to build/stick to the tools (brush off). Sanding is also difficult as sandpaper clogs. Should not use green wood for final project; it will change shape and crack (uniform thickness) unless you don't mind the change in shape. Dry wood is used for final projects, sanded and finished. Turning dry wood is hotter, more saw dust than curls.
- 4. How do you store twice turned bowl after the first turn so they can dry?:** Depends on how long you want to wait for them to dry. Turning to a uniform thickness (rule is 10% of the diameter, 10" bowl should be 1" thick) and then you can place on shelf, table, etc. to allow to air dry. [I never turn green wood down below 3/4" if I am allowing to dry to twice turn; does not allow you any room to make round after wood dries and changes shape. If I turn thinner, 1/4" or less, I will try to blow air through to force water out. I will place in paper bag to control air flow, rotate bag or turn inside out after two days. After a week, take out, sand and finish by hand]. Rule above about water leaving wood at 1" thickness per year applies, so drying could take up to a year. You can use a moisture meter to get moisture content, basically looking for wood between 8% and 10% for dry. Another way to calculate dry is to weigh pieces each week/month and track weight loss; when loss stops, it's dry. I also use a drying box: old freezer I put a light bulb in bottom, cut vent hole in side, small fan to circulate air, and thermometer with rheostat to keep constant temperature. I place bowls in freezer and set temperature for 90 degrees, allow them to cook for about three weeks, then remove and set on shelf for another two to four weeks before turning. Usually gets them down to around 10%.
- 5. How long will it take to dry; how do you know when it is dry:** See question 4 above.
- 6. Anyway to speed up the drying process? :** See question 4 above.
- 7. Why does the bowl need to be the same thickness while it dries?:** See question 4 above. If the bowl is not uniform thickness along the sides, the water will not leave the wood at the same rate and it will crack.
- 8. If your project does crack; ways to save it:** Depends on severity of the crack. If the crack threatens the continuity of the bowl/project and the chance of a catch while turning could cause catastrophic break-up of the piece, it's probably not worth the chance. BURN IT and learn from your experience. Small cracks can be filled with saw dust, fine as possible, and glue. Small cracks I use "super glue", larger cracks I use epoxy. Cracks also provide you the opportunity to enhance the project with a different color saw dust or a color, paint, crushed stone, etc.

9. **Method for gluing up boards to turn: like kinds and different kinds of wood:** Gluing boards, segmented turning, you need to consider grain orientation. Always glue end grain to end grain, side grain to side grain. Keeping the grain orientation consistent helps prevent tear out and extra sanding.

Finishing:

1. **End grain-how to make it look good; and sealers for end grain?:** I have tried sanding sealer, water, sharp tools, and sheer cutting and scraping, all with some success. Sanding is always my final choice and I have done a fair share of that. The best advice I can give is to keep the tool as sharp as possible, go slow, and most of my success has been with sheer cutting and scraping. Sheer cutting uses only the edge of the sharp, sharp tool; to tool is upright, and you move across the surface. Ultra-light touch, and don't allow the nose or heel of the tool's edge to touch or you will get spirals. Sheer scraping, again sharp burr, edge down orientation, and a light touch. Patience and practice.
2. **Discuss finishes; food safe; oils; lacquers; spray polys, etc.:** I have been told that most any finish can be food safe, as long as the finish is thoroughly dry, but I'm not sure. The chemical dryers to speed drying that are in the spray finishes, lacquer, spray poly, etc., and not safe for consumption. However, I have been told that once the odor of the finish has passed and the piece is thoroughly dry, they are safe. I would never use lacquer for a durable, usable piece like a bowl; lacquer is soft and not very durable, it shows water spots if it get wet. I reserve lacquer for items that are "art" pieces, they have little or no practical use except to look at. Poly dries hard, it can show water so that is a negative, but it could take the abuse of a practical, usable bowl and the chances of a piece of Poly breaking off large enough to make someone sick is slight, probably pass right through. Oils are safe, they are natural, but they don't shine which people like. I buff with wax to shine, still food safe, and as the wax leaves and the finish fades, I tell them to rub mineral oil back into the bowl and bring it back to life. A practical use piece does not need to be shiny.
3. **How to get a high rubbed finish?:** Starts with a good smooth surface. Don't skimp on the sanding and leave tool marks or sanding lines. Always remember the 50% rule in sanding and don't skip grits. If you want a high gloss finish, sand at least to 600 grit. Wipe surface with water, damp cloth, spin dry, and sand again. I wipe my pieces with Naphtha which dries quickly and shows me the areas I need to work on. Once smooth, slowly build a finish to get the high gloss, sanding or rubbing in between coats after the surface is dry. Three to five coats will give you a great shine. Lightly buff and wax. Careful with lacquer as it is very soft.
4. **Some woods change color; fade. Ways to prevent. How to keep a bowl looking good especially after using.:** You can't beat Mother Nature, she will always win. If she wants the piece to crack or the bark to fall off, it will happen. If she wants it to fade, it will happen. The best we can hope for is to slow the process. Some finishes have an ultraviolet protection, but my experience is that they don't totally prevent fading. The only sure way is to keep the piece out of direct sunlight and it will last longer; indirect light with fade slower. My experience with Boxelder and Purpleheart has been the longer I keep them out of direct light the longer the red and purple lasts. Heat, light, and humidity do different things to wood, cracking, changing color, changing shape, all of which makes it a challenge working with wood. As I mentioned above, rubbing mineral oil into a food safe finished bowl will bring back the luster temporarily and it's still food safe; if it is not food safe, try Pledge or a furniture polish.

Turning while sitting?: Turning while seated is a definite challenge. I don't have any experience doing such though I sometimes will sit on a stool at the end of the lathe to do some hollowing is my back is tired or I can't see. The biggest challenge I see is getting the correct angle for presenting the tool to the wood. Standing, that angle is roughly determined by the forearms, forearms parallel to the floor should be at the lathe center, spindle height. Sitting, you need to raise the seat or lower the lathe. Other challenges I see are reaching the parts of the lathe, ie. tail stock and wheel, on/off and speed controls, etc. I would think that a stool would be better than a chair; the chair arms would get in the way of movement. Some of these are probably not correctable with a large lathe; a small mini lathe or pen lathe could be placed on a counter or desk. My advice is to research the internet, possibly the AAW, and as for solutions. I found several sites when I googled Handicapped wood turning. I would assume that someone has been turning seated for some time.