TURNING AN INLAID BOX WITH CHATTERWORK -- KIP CHRISTENSEN			
STEP	**SUMMARY**	**PROCEDURE**	**TOOLS AND SUPPLIES**
Preparing the Inlay			
1	Prepare the inlay--step 1	Select a piece of wood that is visually interesting due to color or grain pattern. Cut a piece that is about 1/4" thick and 2" square. If the inlay is to be chattered, the exposed surface must be end-grain.	inlay blank about 1/4" long x 2" square
2	Prepare the inlay--step 2	Sand the bottom of side of the inlay blank so it is flat and clean.	disc sander or abrasive sheet backed by a flat firm surface
3	Mount the inlay for turning	Remove any accessory from the headstock of the lathe and place a layer of double-face tape over the end of the headstock spindle. Center the sanded side of the inlay on the tape and apply light pressure from the tailstock.	double-face tape
4	Turn the inlay	Turn the inlay round beginning with a 3/8" spindle gouge. Turn the final surface using a square-end scraper or peeler. The edge of the disc should be square to the faces. Remove the inlay from the tape (and turn other inlays if desired).	3/8” spindle gouge, square-end scraper or peeler
Turning the Box			
1	Mount between centers and rough turn the outside	Start with a dry blank approximately 3” x 3” x 4”. Mount the wood between centers and turn it to a cylinder using a spindle roughing gouge or shallow spindle gouge using a peeling angle.	spindle roughing gouge or shallow spindle gouge
2	Turn a spigot on each end	Turn a spigot on each end for mounting in a scroll chuck. A skew used in a peeling angle works very well for this cut. A parting tool or square scraper can also be used.	skew
3	Separate the lid and base sections	Using a parting tool, separate the lid section from the base section. Approximately 1/3 of the length should be for the lid portion and about 2/3 for the base. Part through most of the wood leaving about 3/8" in the center; then remove the wood form the lathe and twist the two sections to break them apart.	parting tool
4	Mount lid section and true up the surface	Mount the top section in a scroll chuck. Using a 3/8" spindle gouge turn the outside surface and exposed end clean.	scroll chuck, 3/8" spindle gouge

5	Turn the shoulder inside the lid	Use a box scraper (modified square-end scraper) to turn a shoulder on the inside of the lid. It is important that the shoulder is parallel to the bed of the lathe. Also shape the inside top of the lid.	box scraper
6	Sand and finish inside the lid	Sand to 400 or 600 grit and apply finish to the inside of the lid. Use a finish that either has no order, and won't go rancid, or a finish that has a pleasant smell. (Mineral oil or Homebrew Wax--a beeswax/mineral oil mix--works well). Remove the lid from the chuck.	assorted abrasives, oil or wax finish
7	Mount the base	Mount the base section in a scroll chuck and turn the outside and exposed end clean.	3/8" spindle gouge
8	Turn the spigot	Using a square-end scraper or peeler, turn a spigot to fit the shoulder of the lid. The spigot should be about 1/4" long and parallel to the lathe bed. The fit between the spigot and the shoulder should be snug, but not excessively tight.	square-end scraper or peeler
9	Turn the inside of the base	Remove the lid and turn the inside of the base. Remove most of the material with a 3/8" spindle gouge and turn the final surface with a box scraper.	3/8" spindle gouge, box scraper
10	Mount the lid on the base	Using the spigot as a chuck, mount the lid on the base and shape the outside of the base and lid as one. (If necessary, use a layer of masking tape to make sure the fit is tight enough to support the lid while turning.) Leave enough wood at the top of the lid to allow for the inlay. Leave about 3/4” length of wood between the inside bottom of the base and the jaws of the chuck.	3/8" spindle gouge
11	Mark the lid for the inlay	With the lathe running, draw 3 or 4 concentric circles on the top of the lid. Then turn off the lathe and hold the inlay up to the lid to determine which circle is closest to the diameter of the inlay. This provides a starting point for making the recess for the inlay.	pencil
12	Turn the recess for the inlay	Use a narrow parting tool that is ground for scraping to cut the recess for the inlay. The recess for the inlay should be about 1/8" deep, with the diameter providing a snug fit for the inlay. The bottom of the recess should be flat or slightly concave.	parting tool ground for scraping
13	Glue the inlay in place	To glue the inlay in place, put a small amount of yellow wood glue around the edge and bottom corner of the inlay. Do not spread glue across the bottom surface of the inlay as this may cause the inlay and/or lid to warp as the glue shrinks during drying.	yellow woodworking glue

14	Rough turn the top of the inlay	Use a 3/8" spindle gouge to rough shape the top of the lid and inlay. Leave a little excess material for chattertool set-up. (To include a second (smaller) inlay, repeat steps 11-14.)	3/8” spindle gouge
15	Test the chattertool set-up	Test the set-up of the chattertool by making a practice cut similar to the desired final cut. If the pattern is not desirable, turn the chatter pattern away using the 3/8" spindle gouge, adjust the chattertool or lathe speed, and make another test cut. Note the lathe RPM.	chattertool, 3/8” spindle gouge
16	Sand the top of the lid	Once the chattertool set-up is ready, thoroughly sand the top of the lid.	assorted abrasives
17	Make the final chattertool cut	Using the same lathe RPM and chattertool set-up, make the final chattertool cut. If desired, use a skew to scrape vee-grooves that border the chattertool pattern. Then lightly burnish the chatterwork with fine steel wool.	chattertool, skew, 0000 abrasive
18	Finish turn and sand the outside of the box	Refine the outside shape of the box if necessary. Then thoroughly sand the outside of the box.	3/8" spindle gouge, assorted abrasives
19	Apply finish to the outside of the box	Apply two or three coats of Mylands Friction Polish to the outside of the box. Apply the first coat with the lathe stopped to work the finish into the grain. Apply additional coats with the lathe turning. Cut the finish back with steel wool in between coats. Take care to not apply too much finish over the chatterwork, as this may detract from the crisp cuts of the chattertool.	Mylands Friction Polish, finish rag, 0000 steel wool
20	Sand and finish inside of the base	Sand and apply finish (mineral oil or Homebrew Wax) to the inside of the base.	oil or wax finish
21	Cut off the box blank	Separate the box from the wood by parting through the lower portion of the base. Leave about 3/8" thickness in the bottom of the base.	parting tool
22	Turn a spigot and re-mount the base	On the remaining waste wood, turn a spigot to fit the inside of the base; then secure the base in place on the spigot. The bottom side of the base is now exposed for final turning.	square-end scraper of peeler
23	Turn the bottom of the base	Turn the final shape of the bottom of the base. Make the surface slightly concave and include any desired detail.	3/8" spindle gouge
24	Sand and finish the bottom	Sand and apply finish the bottom of the base.	assorted abrasives, Mylands Friction Polish
25	Admire the finished box	Remove the base from the lathe and position the lid on the base with the grain match lined up.	