

Technique Building Treasures (Tops, Eggs, & Spheres)

Eric Lofstrom – Eric@EricLofstrom.com



Turning tops, eggs, spheres, endgrain bowls, & boxes:

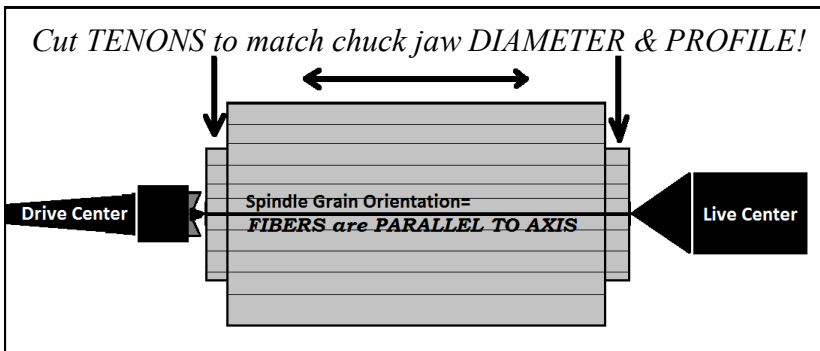
Foundational Information- (attached)

- Lathe Maintenance**– Smooth toolrest, clean ways of bed, ensure spindle alignment, adjust speed range to suite project (var. speed allows fine tuning of vibrations).
- Anchor, Bevel, Cut, Direct Attention Ahead of the Cut, 'Shavings Give Feedback** (see attached). “GLIDE the BEVEL” to direct the cut VS. “RUB” the bevel.

Conceptualize/ Plan the FORM- (design/ preparation, attached)

- Plan the profile & proportions**– Planning solidifies your intent.
- Fundamental Design Considerations** (Concept, Process, & Media)

ROUGHING A CYLINDER- (between centers allows for max. adjustment)



a. Dimension the Blank using Bandsaw/Hand Saw–

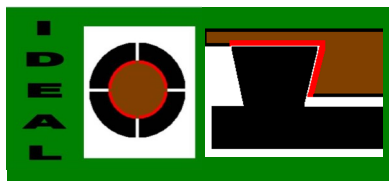
Allows for greater safety at the lathe.

b. Rough Shape to Cylinder–

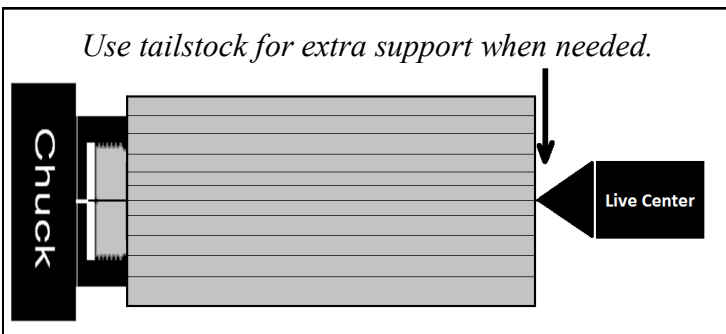
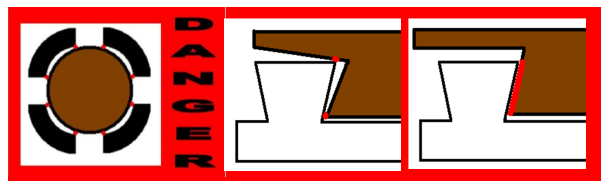
Use SRG, Fingernail Bowl Gouge, or Skew (which is the most versatile cutting tool for this job), leave a bit oversized to truing-up during final shaping.

c. **Spigot & Base-** Profile/ dia. & shape to match chuck jaws & register shoulder on face of jaws. This step is a **VERY IMPORTANT!**

d. **Mount in Chuck**– Use the tailstock for extra support when needed; for longer blanks/



when making aggressive cuts! **True the cylinder w/ a finish cut**– planing/ shearing cut (a light scrape with



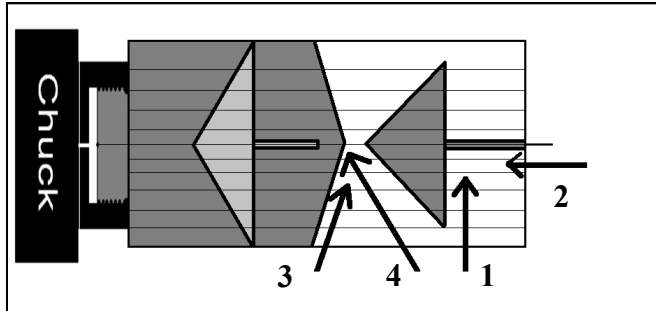
a negative rake scraper may also be used for dense hardwoods). **Pare the end of blank w/ a shear cut using the tip of tool** (skew or spindle gouge), present cutting edge more in-line w/ wood movement.

Technique Building Treasures

(Tops, Eggs, & Spheres)

Eric Lofstrom – Eric@EricLofstrom.com

TURNING TOPS- (*chuck mounted*) Aim for the cleanest possible surface off the tool to minimize sanding! Sanding removes wood unevenly, creating unbalance.

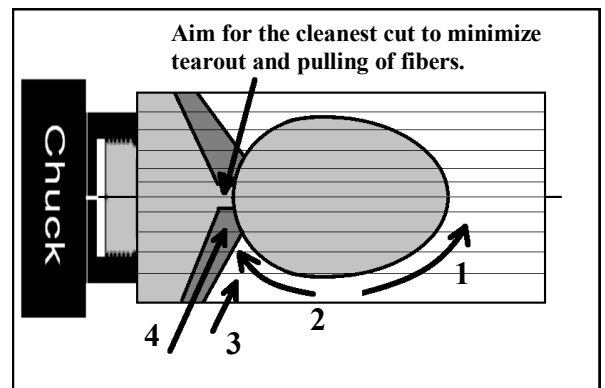


1. **Mark the distance for top handle & use a peeling cut** to remove wood
2. **Smooth the handle with a planing cut.** Detail the transition between handle & top of the body.
3. **Refine/ finish shaping of body**– Create a final profile & cleanest possible surface. **Embellish as desired** with chatterwork, colors, paint, texture, grooves, etc.

3. **Cut the underside using V-cuts**– alternate sides (3 & 4 in diagram) working one side then the other to relieve shaving & allow ejection during the cut. Repeat until approx. 1/8" diameter.
 4. **Sneak Up on the Point**– final cuts for a sharp point should be carried out VERY SLOWLY to avoid plucking/breaking of grain. Remember– surface speed goes to 0 mph at center axis...slow down & take it easy!!!
- ***Create a SOFT LANDING** for your finished top– have someone use both hands or lay a towel or padded box on the lathe bed. **If needed, soften or true the point** using 400+ grit sandpaper, work carefully to maintain a balanced point for best possible spinning.

TURNING EGGS-(*chuck mounted*)

1. Mark the largest diameter, following the 1/3-2/3 rule & **begin cutting the narrow tip of the egg** using the skew or spindle gouge.
2. **Begin w/ broad end** of the egg by gliding the bevel on the mark made for the largest diameter. Ease into the cut using your entire body to create a smooth transition.
3. **Cut a V-notch** to relieve the shaving created with #2. Alternate between cut #2 & cut #3, pay close attention to gliding the bevel & picking up the cut to blend the curve with each successive cut.
4. Once the egg is attached by approx. 1/4" diameter, sand the form to blend any facets or tool marks. Sand to 400+, end by sanding with the grain for the finest finish. **Carefully cut the egg from the lathe** using your choice of technique; cutting with a fine toothed hand saw with the lathe stopped, parting with the tip of a sharp skew (using a paring cut), or removing from the lathe & cutting on a bandsaw using a V-block for safety.



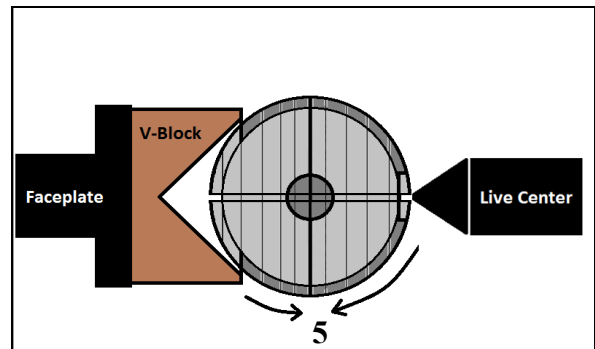
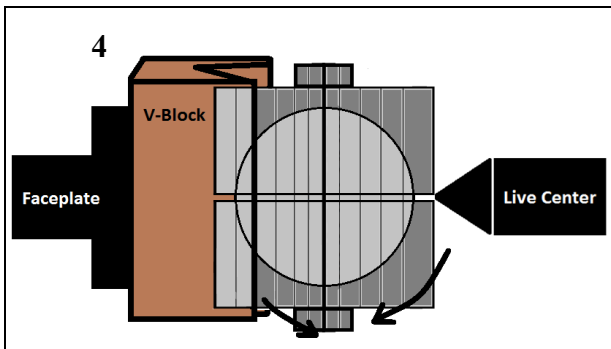
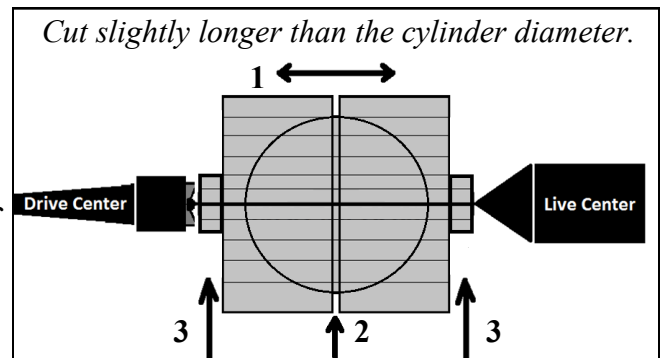
Technique Building Treasures

(Tops, Eggs, & Spheres)

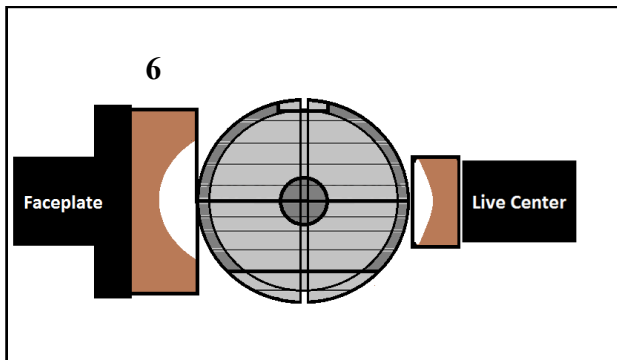
Eric Lofstrom – Eric@EricLofstrom.com

TURNING SPHERES- (chuck/ faceplate mounted) Aim for the cleanest possible surface off the tool to minimize sanding! Sanding removes wood unevenly, creating unbalance. Before starting this project, ensure lathe spindle & tailstock are accurately aligned. If the lathe is out of alignment, the protocol listed below WILL NOT result successfully!

1. Rough cylinder & cleanly cut the ends to a length *slightly* longer than the overall diameter. **Mark the CENTER of the cylinder.**
2. Using a parting tool, **cut a groove at center** to the desired final diameter of the sphere. This groove serves as a reference line in finish turning the sphere.
3. Turn most of the waste away at the ends of the cylinder. **Leave a clean cut across the endgrain.**
4. Remove cylinder from between centers & **mount in a V-Block** or using a 4-jaw chuck with jaws spread 1/2 way to trap cylinder perpendicular to the lathe's axis.
5. Using a fingernail grind bowl gouge or negative rake scraper, **remove waste wood down to reference groove.**



6. Once the sphere is nearing final size, remove from V-Block and mount between cup centers. Cups should be slightly smaller radius than sphere blank to ensure proper alignment between centers. Turn waste away, stopping just shy of complete truing of the sphere, rotate the sphere 90° to the current axis & repeat truing. Sand as necessary, using the same technique of 90° rotation. *Note: Your lathe MUST be in alignment, otherwise you will be chasing an unattainable spherical form.*



Technique Building Treasures

(Tops, Eggs, & Spheres)

Eric Lofstrom – Eric@EricLofstrom.com

USING CHATTER TOOLS TO CREATE TEXTURE- (endgrain texturing)



- a. Chatterwork is ***MOST effectively applied to endgrain*** of dense woods or acrylics.
- b. ***Can be accomplished using VERY simple, inexpensive tools***; small sections of hacksaw or bandsaw blades, flexible butter/table/frosting knives, or other piece of thin, springy steel.
- c. ***Chatter occurs*** when pressure from the shaving flexes the tool away from the wood, OR the forcing the wood away from the tool, both

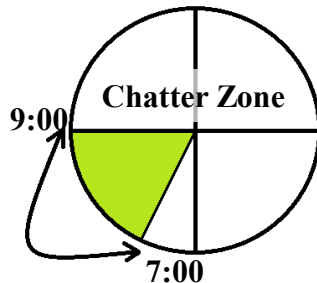
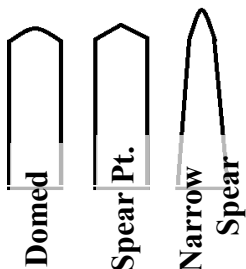
mechanisms result in a harmonic patterned cut.

- d. ***To experiment with chatterwork, first tune your cutter*** so it has a 90° bevel angle with no burr, to minimize cutting/scraping action. Then position the tool rest so the tool flexes without contacting the rest.

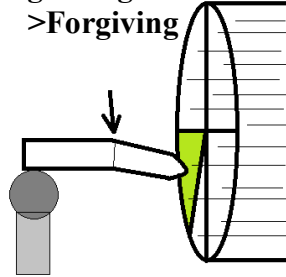


- e. ***Angle the tool so the cutter makes contact between 7 & 9 o'clock*** on the face of the blank.
- f. ***Initiate contact between the cutter and the wood***, pressing firmly against the wood to initiate a harmonic, then sweep the tool across the radius to the surface.
- g. ***Different effects result from variations in*** the cutter profile, angle of cutter presentation, pressure & “sweep” of cutter into the wood, & wood density. Even if you are exact in replicating all variables, your chatterwork will vary slightly, giving each piece unique artistic personality. I encourage you to explore ALL of these variables.
- h. ***Chatterwork lends itself to highlighting with color, gilding, or burnishing*** (especially when using very dark, evenly dense wood such as cocobolo, blackwood, ebony, purple-heart, or rosewood). Clean the surface with a nylon brush or very fine sandpaper to remove any fuzzed grain before coloring. Permanent markers can be used to highlight the undulating surface on blonde woods such as eastern maple or white holly.

Sample Tip Profiles



Slight Neg. Rake=
>Forgiving



remove any fuzzed grain before coloring. Permanent markers can be used to highlight the undulating surface on blonde woods such as eastern maple or white holly.

Foundational Info.— Spindle & Endgrain

Eric Lofstrom – Eric@EricLofstrom.com

ABC...D'S of Making the Cut:

A = *Anchor* tool w/ toolrest & body support.

B = *Bevel* awareness, directs tool movement.

C = *Cut* supported fibers when possible.

D = *Direct* attention ahead of the cut.

'S = *Shavings* give feedback on quality of cut.

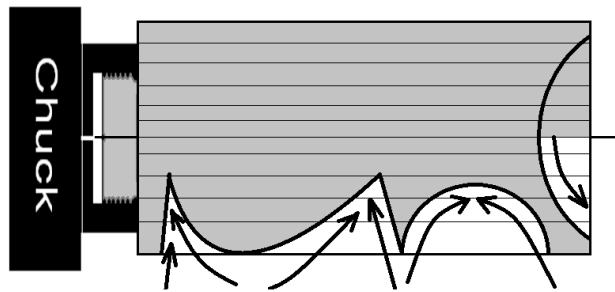
3 points of contact increases tool control & stability; toolrest, bevel, & hand/body.

Move as a UNIT to create flowing CURVES.

Cut vs. Scrape:

- **Cut** = Bevel glides across wood.
- **Shear Cut** = Cutting edge aligns with direction of wood surface movement.
- **Scrape** = NO bevel/ relief contact; drawing the burr/ edge across the wood.
- **Shear Scrape** = scraping at $\geq 45^\circ$.

Shearing fibers decreases stress introduced to the wood & results in the cleanest surface.



Grain Orientation Matters!

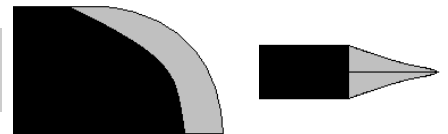
wood is a bundle of straws; which flex & tear if there is no support behind them, resulting in torn grain (a.k.a. “tear-out”). **Cutting “supported fibers” gives a cleaner surface & requires less sanding.**

SPINDLE & ENDGRAIN Turning = fibers lay PARALLEL TO AXIS of rotation

My Preferred Tools:(approx. profiles)

- **SKEW** (large rectangular shank)- used to rough & refine outer form. On LARGE pcs., fingernail bowl gouge is more forgiving.
- **SPINDLE GOUGE** (Detail Grind)- used for fine details; coves/beads/chuck spigot.
- **PRO-FORME** (Guarded Hook by Wood-cut)- used to rough endgrain, quick removal of material w/ “cutting” mechanics.
- **SCRAPER** (trad./ neg. rake)- used to refine endgrain curves, angle the cutting edge to shear scrape when possible.

Large Skew-
w/ radius tip



Spindle Gouge-
w/ detail grind



Pro-Forme-
Hook tool



Scraper-
shown
w/ neg. rake



Explore different tools, use what works for you, & keep the edges sharp!!!

Fundamental Design Considerations

Eric Lofstrom – Eric@EricLofstrom.com

FORM:

- PRODUCT/ OUTCOME*
- MOST IMPORTANT ELEMENT!*
- Central to all other considerations.*
- Focus of INTENT = Target*
- Finished item*

CONCEPT:

- PLANNING/ DESIGN of FORM*
- scale, proportion, unity, rhythm, balance, emphasis, etc.*
- color, texture, choice of media, etc.*

MEDIA:

- MATERIALS INVOLVED*
- wood species, grain, orientation, natural elements/ features, etc.*
- mixed media– species, metal, glass, acrylic, stone, ink/ pigment/ color, etc.*
- choice of finish*

PROCESS:

- EXECUTION OF CONCEPT*
- tool mechanics (cut/ scrape, control, technique, etc.)*
- finishing techniques (embellishments, finish)*

