

Discovering & Exploring the Wonders of Shape & Form

The following handout is a work in progress and will be the basis for a five day class taught at the John C. Campbell Folk School in February 2009

Introduction & Discussion:

This class provides students an opportunity to explore design and form while at the same time honing their skills and possibly learning some turning techniques that will make their time at the lathe much less like work and definitely a more fun and pleasurable experience. We will be turning and studying Hollow Form & Bowl shapes as well as experimenting with texture and color. The last part of the class may be student driven and the instructors will be receptive to the direction students wish to pursue. Students are encouraged to bring along not only their creative ideas but also any tools they may wish to use to add texture or other embellishments to their work. Some time may be set aside, if students are interested, for exploring the turning of fine detailed finials. The instructors of this class are well versed and capable of leading the students on the path of their choosing after having laid the groundwork for exploration.

We will go through some practice exercises that are designed to help us see how shape and form are developed and how appealing some basic concepts can be when used to make an object more pleasing to the human eye. Hands-on learning is more interesting and also would be a way for us to share our own sensibilities when it comes to design and form. We all have our own sense of what is beautiful and attractive and like most human endeavors there is not one simple answer or solution as to what constitutes a good art form. There are however a few basic rules or concepts that can be used to help us achieve that which we may see as an artful shape or creation. I have included in the handout materials Keith Tompkins' excellent handout titled "*An Introduction to Form & Design*" as I found it to be very helpful and think that it will add to the discussion and information that will be presented in this class. I feel that by doing a series of exercises or by making a series of similar objects we may learn and see how these good design ideas come about and how they influence the way we make things. One of the purposes of this class is to see how seemingly minor changes in shape or form can change the feel of the piece. The concept is to make a simple object that we can manipulate in a short amount of time on or off the lathe. One way to do this would be to use a stick of wood 2" thick and roughly 9" to 12" long as our palette and to turn a variety of shapes. These shapes can then be used as an aid to delving into embellishments such as mixed media, carving, dying, painting and texturing.

Turning experience is a requirement for this class because there will be little time available to teach students how to turn. The object of this class is to go beyond turning simple forms and to explore all sorts of possibilities and to build a good foundation or feel for what constitutes good form and design. It is meant to be a time to play and to search for one's own inner voice. No longer are we going to be satisfied to copy another turner's forms and designs, for we are now ready to be freed to make our own creations.

Our main goal should be to turn and create objects that are pleasing to us and not necessarily to others be they fellow turners or art critics. First and foremost we should create those objects that are pleasing to our own vision and that make us happy and not try to please or seek accolades from others. This class will be part lecture and demonstration; the hands on turning will be focused on turning and playing with shape and form, not on turning out finished pieces. Students participating in this class will be encouraged to offer their views and ideas. Please come prepared to share your ideas and talents.

One of the personal discoveries that I hope to impart to participants in this class is to no longer fear making a mistake or experimenting with a new design or direction. We are our own worst critics and therefore tend to stifle our own creative instincts. We should be making and developing work that appeals to us. As long as the quality of workmanship is present any direction we choose to go should be acceptable. We must be willing to and allow ourselves to experiment with shape, form, color, texture and a variety of other techniques. For without taking a risk and experimenting there is little chance for a successful breakthrough. The plan is to take ourselves on the creative road to new work and the development of our own style. We must remember that there is nothing wrong with so-called failure in woodturning, as each slip is a just another creative opportunity and a step toward newer, more creative work. It is difficult to reach the next level without experiencing some lack of success or set backs; they are all learning experiences that if taken in a positive light become stepping stones to better and more creative work. The most important thing to remember is that, *“True perfection is not always achievable as it is a fleeting Goddess always flirting but never caught. This is not to be confused with quality of workmanship or craftsmanship as they are a prerequisite for exceptional work.”* For me, my driving force is the fact that, as I get better technically, the bar is raised and I just never seem to produce what I would call a perfect piece. At times I think that I tend to be overly critical of my work. But what I have come to realize is that seeking that perfect piece is what keeps driving me to learn and experiment and to constantly challenge myself. There are no exact answers for what constitutes a perfect shape or form; there are just some good guidelines as so many factors affect the overall appearance of the work in question. One of the reasons the Greeks developed the entases of columns was so that they would look right when lined up and seen from our perspective. Most students are seeking an answer or set of rules that will enable them to make beautiful forms but unfortunately there are only guidelines. A maker has to be careful not to adhere to strictly to Golden Section or the guide lines for the perfect form, as the work in progress may look and feel static, lacking that zest that comes from the flowing lines and the slight wavering from the set rules that will give the piece a bit of kinetic energy that just pulls the viewer in and draws them to the piece. One must experiment and take risks in order to discover on one's own what it takes to make a well proportioned piece that will satisfy our own sense of style and form. Remember too that some of the best work is that which was arrived at via a happy accident. One of the objectives of this class is to encourage the students and instructors to step out of their comfort zones and to break new ground experimenting with new ideas while not worrying whether or not the result will be an exceptional piece. So relax, experiment, forgive yourself for the small setbacks and above all open your mind and eyes while looking at the world around you for inspiration and free yourself to create what appeals to you the most and most importantly have fun creating!

Tools & Materials:

- 1 ¼" Spindle roughing gouge or smaller
 - 3/8" Spindle Gouge
 - 3/8" Bowl Gouge
 - ¾" Round Nose Scraper
 - 1/16" Chris Stott Style Parting Tool
 - ¾" Skew or similar
 - Hollowing Tools for small vessels 7" to 9" tall and maybe 4" to 5" in diameter
 - Eye Protection/ Face shield
 - *Sorby Texturing Tool
 - *Point Tool
 - *Carving Tools/Grinders/Shaping Tools Hand and Powered
 - *Dyes/Paints
 - *Medallions/Buttons/Finials/Glass Beads/other decorative objects
 - *Sandpaper
- *Anything you have or can think of that can texture, color, add to, or alter a turned piece
- Students should be encouraged to bring in examples of their current work**

Wood:

The wood selected for boxes should be kiln dried to 8% to 10% depending upon where you live as the wood will take on or give off moisture to equalize itself to the local humidity. The wood should be relatively plain and inexpensive as we are experimenting with shape and design and are not at all concerned with turning out a gallery piece in this workshop. The sizes will vary but for starters we would want the following:

- 2"x2"x 9" (1) painted a dark color such as black, Optional one blank per person
- 2" x 2" x 11" or 2"x2"x14 ½" (1 or 2) Poplar for vase shapes (hollow form shapes)
- 3" x 3" x 12" (1) Poplar for bowl shapes
- 3"x3"x 4 1/2" (3) Poplar or soft maple or some other common inexpensive wood
- At least three blanks per person
- 3" x 3" x 6" (2) Blanks for boxes Maple or Cherry
- 3" x 3" x 7" (2) Blanks Poplar for shaping Hollow Forms
- 3" x 3" x 7" (1) Blank Maple for shaping Hollow forms
- 2" x 11" x 11" Blank for Platter shapes Maple, Poplar
- 3" plus x 8" x 8" or larger Blank of Greenwood for bowl shapes
- 2" x 2" x 3" plus or minus for Hollow Globe Ornaments or Birdhouse Ornaments
- 2 ½" x 2 ½" x 3" for Birdhouse Roofs
- 2" x 2" x 5 ½" Blanks for Icicles for Hollow Globe Ornaments.

Class description:

Our intent is to have at least one short demonstration or discussion each morning and at least one demonstration or discussion period in the afternoon. The idea is to have as much hands on time as possible and to leave the maximum amount of time to play with all the new ideas and concepts but still spending just a bit of time tweaking our skills with new and old tools and equipment.

Day One Morning:

Practice tool techniques and skills while turning practice exercises that are designed to enhance tool skills and that begin the exploration of design through shape and form.

As this class is about exploring shape and form and most importantly is designed to be a participatory class, that is, student feed back and participation is essential to the success of the class. Students are encouraged to share their thoughts and feelings on design and should feel free to share their opinions as to what shapes and forms are most pleasing to them and to share their thoughts on how a particular object could be changed to make it more appealing. My intent here is for students to add to the discussion not to dominate it. Remember the goal here is to improve our sense of shape and form not to hurt feelings or to be overly sensitive if comments are made concerning our work. Any critique of our work should be presented in a positive supportive manner. Remember also that judging shape and form in many respects is subjective and that there are many opinions as to what is beautiful or elegant.

1. We will start with a quick exercise designed to help practice tool technique and control. Using a 3" x 3" x 4" block mounted in a chuck and turned to a cylinder. Then using either a 3/8" bowl gouge or 3/8" spindle gouge we will practice making a facing off cut. In this cut the flute is in the closed or 3 o'clock position facing away from the blank. The idea here is to turn a perfectly flat surface.

The next cut to practice is the full bead. This is followed by practicing a full cove. Then we will try an ogee, which is a cove that flows into a bead and finally we will turn an ogee where the bead flows into the cove. All these cuts are done with the bevel of the gouge gliding through the cut. The smoothest cuts are achieved when the bevel is pointing in the direction of the cut and just gliding across the surface with very little pressure into the work. I sometimes refer to this cut as the hip shake wiggle as my hips start the cut shifted toward the tailstock for the cove to the bead ogee and then as the tool flows through the cove my hips shift toward the headstock, then as I begin the bead portion of the ogee my hips shift back toward the tailstock. For the bead to the cove ogee my movements are the exact opposite. What we are after here is a nice smooth flowing motion of the bevel sliding through the cut with our body shifting and moving through the cut in a nice even flowing motion.

2. Next using a 2"x 2"x 11" (if using mini lathes), for full size lathes use a (2"x 2"x 14 1/4") piece of wood we will turn a series of vase shapes (hollow form shapes) in line with each other at least three to a stick, all should be of a similar shape to each other but the widest part should be moved up or down on the form to change the ratio between the top, bottom and mid section. Measure and mark the cylinder every 3" with a 5/8" waste space in-between (*It might be a good idea to use this waste space or clearance space to put a foot on the vase shape for later mounting on the lathe to finish the hollow form and prepare it for the embellishment part of the class later in the day*). This would be a good time to set the diameter of the tops at say 1 1/8". *You can use the story sticks provided to mark out the spacing and the diameters for the sample Hollow Form Stick.* The next step is to mark the center lines for the widest part of the sample hollow forms using the traditional ratios of say 1/3 to 2/3 (1" to 2"), 1/4 to 3/4 (3/4" to 2 1/4"), 3/8 to 5/8 (1 1/8" to 1 7/8") and just for effect try 1/2 to 1/2 or any other ratios you might like to try. We may want to turn two sticks practicing these shapes and then pass the least desirable one on to

our neighbor who will then play with the shapes to make something interesting or to improve the overall design. Another exercise would be to take one of the shape sticks and play with the shapes by removing a bit of wood here and there. Then watch how the removal of just a bit of material here or there improves a curve (shape) or try moving the centerline to improve a shoulder. Please, observe how these minor adjustments can completely change the feel and look of the object.

***Note:** Good form is not easily accomplished using set dimensions and ratios, as if from some magical formula. It tends to evolve from the form and is affected by the overall size of the finished form, the grain pattern in the wood, its intended function and many other factors that might come in to play. The height and width of the piece will also have a bearing on the ratio used.*

Some of the more common ratios are 2/5 to 3/5, 3/8 to 5/8, 1/3 to 2/3, and 1/4 to 3/4. Some minor alterations or adjustments may be necessary to create a pleasing shape. Many architects and others use the ratio of 3/8 to 5/8 to represent the golden section. I have found that in small scale work such as boxes, that there is very little visual difference between the golden section ratio of 3/8 to 5/8 and the ratio of 2/5 to 3/5. Wood grain or figure will also have an effect on the overall appearance of the piece. The addition of a lid or finial will change the overall appearance and shape of the form. The continuous curve that flows smoothly as it changes shape will be affected by the size of the piece that is the height and width. Then there is the artists' own sense of design and the feeling they want to pass on through the finished work.

Also keep in mind that all curves and transitions should flow into and out of each other, much like the curves found in French curves used in architectural drawing (also known as a fair curve). A good curve or ogee takes the eye on a journey through the work. Sharp transitions or changes in the direction or tightness of a curve interrupts and disturbs the flow of the form.

3. Another exercise we could try would be to use painted practice sticks to delve into shape and form by turning shapes that are enhanced by the two tone effect of the colored wood. Allan Batty used this method to enhance some of the shapes used in the transition from the pilaster to the turned part of a baluster. This exercise would be an excellent one for those turners that are interested in learning the shapes used in turning balusters and other spindle style turnings. Stuart Batty turned a sample stick, which includes most of the cuts used in baluster turning. I have made a copy of this stick and use it to demonstrate the various cuts and shapes used in architectural turning. Myron Curtis and I did a dueling demonstration on several occasions using this stick to show how we use different techniques to achieve the same result and to help explain some of the differences between architectural turning and artistic turning.

4. Just for fun we could try turning eggs to help us explore fair curves, improve our tool technique and to see how minor changes in the mid point or in the curves themselves will completely change the look of the egg. As an added exercise we could make use of jam chucks to turn or reshape the eggs once they have been parted off the lathe. These egg shapes can later be used for texturing and experimenting with dyeing and coloring.

Day One Afternoon:

5. Now that we have some objects to work with, we can begin to explore adding embellishments and color to these forms to enhance their beauty. We can use detailing tools, chatter tools, carving tools, paints, dyes, automotive paints, etc. to enhance our turnings

Note: We will incorporate the use and discussion of embellishments and adding color to our turnings throughout the course

6. While these shapes are still fresh in our minds let us try turning a full size hollow form shape using the ratio that you found most pleasing in the earlier exercise. The intent here is not to spend time hollowing this hollow form, as we are still exploring shapes and want to spend our time playing with shape and form not making finished objects. We can drill a hole in the end for the insertion of a glass tube so that the form can later be used for flowers. I suggest using a dry Poplar blank 3" x 3" x 7" plus or minus. Before sanding and finishing the form we will bring them up to the front while still in the chuck for feedback on the form. Then we can go back to the lathe to finish turning the form. If there is time or in the evening we can experiment with other shapes. Ultimately we like to do three different shapes if there is time.

Please seek feedback before finishing or taking the form out of the chuck. To receive feedback please take the chuck off the lathe with the form still attached that way it can be easily reworked if necessary. The feedback will be given with all the students work displayed so that it can be used a teaching exercise for all.

7. After turning the form, it could be sprayed black or some other solid color. This would help us to see the form without being distracted by the grain of the wood. This way the eye can focus on the lines of the form without being distracted by the varying color of the wood or the grain pattern. We can also add embellishments to the form by adding texture, color, carving the rim, etc.

**It might be a good idea to leave a foot on the base so that later on if you choose you could hollow the object and finish the hollow form, just remember that this class is about playing with and exploring shapes, not so much about making finished pieces we will do that later on in the class or in the evening on your own. You could use an expansion style foot that way it will not interfere with the overall look of the form. (Turn the blank between centers and put a foot on what will be the top end for mounting in a chuck. Mount the blank in the chuck and then turn a small expansion foot on what will be the bottom end and then remount the blank in the chuck and begin to turn your hollow form shape.)*

Day Two Morning:

The objective of day two is to continue to play with shapes and forms and to work with ratios instead of set measurements and to begin to feel and see what constitutes good shape and form. We will explore how changing the curve a bit here or there on a piece will completely change the appearance of that piece. At this point we will still be focused on playing with the wood and shapes and not on turning out finished work. *It might be a good idea to show some typical bowl shapes at some point on a white board preferably after the students have had a chance do the bowl exercise.*

Exploring bowl shapes:

1. Now that we have played with hollow form shapes let's try a similar exercise but turn bowl shapes. Using a 3" x 3" x 11" blank, turn it to a cylinder between centers. Mark off sections (using the story stick provided) for bowl shapes approximately every 2" separated by

approximately $\frac{3}{4}$ " waste space to ease tool access (*once again it might be a good idea to form a foot for mounting in a chuck in the Clearance space so that the bowl shapes could be further turned in preparation for the embellishment part of the class*). When cutting the waste space for tool access, it would be a good time to set the diameter for the top of the bowl shapes at $2\frac{3}{8}$ ". Now let's turn another stick, but do bowl shapes. Once again, move the widest part or midline up and down using the ratios of $\frac{1}{4}$ to $\frac{3}{4}$ ($\frac{1}{2}$ " to $1\frac{1}{2}$ "), $\frac{3}{5}$ to $\frac{2}{5}$ ($1\frac{3}{16}$ " to $1\frac{13}{16}$ "), $\frac{2}{3}$ to $\frac{1}{3}$ ($1\frac{3}{8}$ " to $5/8$ "), $\frac{1}{2}$ to $\frac{1}{2}$ (1 " to 1 ") and $\frac{5}{8}$ to $\frac{3}{8}$ ($1\frac{1}{4}$ " to $3/4$ "). The ratios of $\frac{2}{5}$ to $\frac{3}{5}$ and $\frac{3}{8}$ to $\frac{5}{8}$ are very close together and in my opinion are almost interchangeable (especially on this small of scale), as a general rule I use the ratio of $\frac{2}{5}$ to $\frac{3}{5}$'s to represent the Golden Section Notice how the look of the bowl changes by moving the widest point up and down. Now that you have seen the effect that moving the widest point affects the overall look of the bowl, try removing a little bit of wood here and there to improve or change the curve. Remember all curves should be fair curves.

Definition of Fair Curve; a fair curve is one that is a continuous curve such as that found in the French Curves used in architectural drawing

2. We can now use these bowls shapes as a palette for adding embellishments such as texture, color, carving, etc.

Day Two Afternoon:

3. We have had the opportunity to play with bowl shapes so now let's pick the shape you like best and make a full size version. As it does not take very long to hollow a bowl you can go ahead and finish the bowl. We can also experiment with a chain and the catenary curve idea described in Keith Tompkins handout that is attached to this handout. He also describes a variety of ways to use the Golden section to help us develop pleasing shapes. Please read his handout carefully as it is an excellent tool to aid us in our search for form.

Note; before turning a finished bowl try playing with the top of the bowl. Start by forming an outward opening rim, then try pulling it in for a straight rim, then try pulling it a bit more to form a closed rim.

4. Once again now that we have some bowl shapes that we can manipulate we can add embellishments and coloring techniques to enhance our work. We may even begin to discuss manipulating our turnings by cutting and reforming them into sculptural shapes and forms.

5. If there is time we could play with the platter form and a variety of rim styles on platter forms.

Note: At some point in the class before we concentrate more on embellishments and other projects, some time should be spent (with ample student participation) discussing shape & form by showing examples of work both current in the class projects and those that students have brought from home. The idea here is to focus on the lines of the work and suggest ways that the form may be altered to enhance its overall appearance. Using a shadow light may be of some help here or maybe the use of a blackboard or white board in the background to make it easier to see the lines of the work.

Day Three:

If there is enough interest among class members, we could spend some time today on exploring fine finials and some of the variety of designs and shapes that will be a great addition to other turned forms by adding an extra element of design to enhance the appearance of the turned object whether a hollow form with a lid or a box needing a touch of elegant height. We can also, explore platter shapes and spend more time discussing and exploring the possibilities of these shapes and forms.

Day Four:

Now the fun begins as we will begin to add embellishments such as color and texture at will. We may even begin to use other media to help enhance our designs. The instructors will be available to help students explore their individual interests.

Students can now explore shapes, forms and projects that are of specific interest to them while we will continue working on embellishments and discussing shape & form.

Students can play with a variety of projects such as tool handles, seam rippers bottle stoppers etc. Students may also want to make a simple jig for turning bottle stoppers.

At last we will begin to turn objects of individual interest whether that is bowls, platters, hollow forms or boxes. In the afternoon we will do a class critique of what was turned that day. This is not meant to be a competition but rather a learning exercise for both the student who turned the piece and the class (egos must be left behind for this exercise for it is geared toward adding to our knowledge base of what it is that constitutes good design.) and is not intended to hurt feelings or to be competitive but rather to help us to expand our understanding and appreciation for good design and form. This perhaps is the most difficult class session as it is very difficult to critique an object without some hurt feelings. Please try to remember we are trying to improve our sense of shape and form and the most effective way to do this is through the critique. This is intended to be a positive exercise.

Day Five:

Today is free form once again the student can explore his or her interest in turning and turn something of their choosing and add to or embellish it at will. Finish up work and gather for a last chance question and answer discussion period to review and add to our knowledge of shape and form

Supplemental Exercises:

A. Consider painting a 2"x2" black or some other dark color and turn away parts of the piece as you would if turning a baluster or stool leg

B. Set parameters, everyone is given a 3" x3" x 3" block and is challenged to see what they can make from that piece of wood. A time limit may need to be set in order to get the projects done in a reasonable time frame. For Chapter meetings this would make an excellent monthly challenge.

C. Turn a box, no need to have a tight lid. Play with the most common ratios that are used most often for the size of the top of the box to the bottom of the box. $2/5$ to $3/5$, $1/3$ to $2/3$, $1/4$ to $3/4$. Now try turning a box that does not match the previous ratios.

D. Now play with a variety of shapes. Find one you like and then try manipulating the shape by taking a little more wood off here, a tad more off there and see how quickly the overall look and feel of the box changes. Some shapes to consider are say a squat box, tall box, a bowl with a lid, a triangular or cone shaped box, maybe one that has a nice hour glass figure, a vase shape, the shapes and sizes are endless. One thing to consider is whether it will be strictly an art piece or will it be functional as that may have an effect on the overall design.

E. Now let's play with color and texture to see how it enhances or detracts from our simple design.

F. We can now start adding features or other media to our boxes. One way is to inset a precious stone or button. Maybe add a finial either of wood or some other media such as art clay silver.

G. One could try using the candle stick as a design format. If so one approach would be to tie in a simple laminated design by gluing up 5 layers of wood. Keep it simple at first and then experiment. For instance, try sandwiching two $1/8$ " thick pieces of Cherry or Purple Heart veneer between three layers of $3/4$ " maple all layers should be approximately $2\ 1/2$ " wide plus or minus. Other woods would work just fine but it would be best too have two dark layers sandwiched between three lighter colored woods or vice versa. Dyed veneer would work also.

H. Try giving the students several $2'' \times 2'' \times 4''$ blocks of wood and have the students turn a variety of finial shapes, that can be used for hollow form lids or box tops or even for wine stoppers.

I. At some point the students might like to experiment with combing shapes and parts to make a sculpture or artistic piece.

J. A real good exercise for practicing turning flowing or fare curves and ogees is to turn egg shapes. The shape of an egg is a perfect example of a smooth flowing fare curve.

K. A good way to check your form for shape with out being distracted by the grain of the wood is to paint it black. This enables you to view the form and makes it much easier to spot flats and slight irregularities in the blended curves. Turning the piece upside down and viewing it this way will let you see if you have turned a nice form for if it looks just as good upside down as right side up you know you have achieved a good form.

L. A fun exercise to do would be to turn spheres which could later be used to practice coloring techniques

M. ***Consider providing students with templates of different shapes to help them turn the various shapes and forms on the lathe. It would need to be a negative image so that they could set it up against their turning to match it.(tip provided by Randy)*** My preference would be to let them turn their own shapes but for those that may have trouble working in a 3-d format the template idea could be a great help.

The Vocabulary of Design.

Balance: Objects are considered to be in balance when they are of equal weight. That can be in terms of size, color, contrast, texture, shape etc. Balance is the sense of equilibrium displayed by an object.

Color: Color refers to the a variety of colors such as the primary colors of Red, Blue, Yellow and the colors and shades of colors that can be created by combining these colors. The color wheel is the easiest way to see how most colors are derived from the mixing of these primary colors. A Color can be described further by its value and hue as explained below.

Value: refers to the strength of the color or its lightness or darkness.

Hue: is the dimension or gradation of color and refers to a scale of perceptions of color ranging from red through yellow, green, blue and back to red as seen in the color wheel used by artists or in the rainbow. A variety of Hues can be mixed from the three primary colors of red, yellow and blue, with black resulting from a combination of all colors and white being the absence of color.

Catenary: A catenary is the curve or shape produced when a chain is suspended by two points (each end), where the force of gravity acts upon the entire length of chain to produce a curve or arch that when placed in a golden rectangle or golden section it fits perfectly. The catenary effect can be used to produce smooth flowing forms. Smooth uninterrupted curves are referred to as organic curves or fare curves

Composition: The composition of a work is the structure or combination of all the parts or elements that come together to form the work. It includes the layout, symmetry or asymmetry, the color essentially all the parts that make up the final form.

Contrast: The use of opposing elements, such as shading, coloring, forms or lines in proximity to produce an intended effect. It Contrast can be used to separate objects or parts of a work.

Embellishment: The adding of color or a variety of objects, parts, textures to enhance a work

Emphasis: Making an area or part of a work stand out more than the other parts. Emphasis is the main focal point of an object; which helps to create interest.

Fare curve: Describes any arc or curve that flows smoothly without interruption, such as an ogee that flows from either a convex curve into a concave curve in a smooth flowing manner or vice versa with out being interrupted by a flat. A good example of fare curves can be found in the French Curves sold in art stores as templates for drawing fare curves.

Golden Section (Golden Mean, Golden Proportion): Is generally referred to as that proportion found in objects or drawings that are most pleasing to the human eye. The golden

number is 0.618 is to 1 as 0.382 is to 0.618. Architects and others have adopted the ratio of 5/8 to 3/8 to represent the Golden Section.

Golden Rectangle: refer to Keith Tompkins Handout entitled “An Introduction to Shape & Form”

Movement: movement brings the element of time into our work.” Real physical motion has direction, speed and duration. Visual motion is usually implied through shape, value, and lines. In composition these are used to lead a viewer through a piece, or back into the implied depth”. Quoted from *Design Language by Tim McCreight*

Positive vs. Negative Space: Here I am referring to positive space as that which is solid and negative space as that which is open.

Proportion: The overall dimensions of an object and the relationship of elements within that object.

Repetition: In design repetition refers to the repeating of a pattern, shape, figure, form, texture, color etc.

Rhythm: Sometimes patterns can be formed in such a way that as your eye travels over the object a visual rhythm results as the eye sees various patterns, textures etc. Repeating patterns or arrangement of elements within an object; rhythm creates a sense of order or movement.

Texture: Is not always three dimensional but for our purposes texture refers to the smoothness or roughness of the turned object. There are many ways to create texture in wood turning, a detail tool can be used to rough up the surface, a chatter tool can be used to create patterns and texture, a series of beads grouped together forms a nice texture, sandblasting the surface, carving the work, these are just some of the ways to create texture on a turned object. By adding texture we can add a whole new dimension to our turnings.

Unity: A sense of unity is created when elements of a design work in harmony.

Discussion Topics and Ideas

Be sure to discuss the flowing curve on the bottoms of vessels and how the curve should gently flow under the vessel and end somewhere in the foot. This helps create the effect of the vessel floating off the table top. For if the curve dies below the table top it makes the vessel look firmly mounted to the table and gives it a heavy appearance. The size of the foot may need to be discussed as well, if the object is to be a functional piece the foot should be $\frac{1}{3}$ to $\frac{1}{2}$ the diameter of the object, or if an art piece, the foot can be much smaller.

A consistent wall thickness helps to minimize distortion and changes in the shape of the piece as it takes on and gives off moisture with the changes in humidity and temperature.

Emphasize the idea of a continuous curve with out sharp transitions and flats.

(fare curve)

One very important idea or concept to discuss is the fact that most of us design our pieces to use the whole block of wood that we have mounted on the lathe instead of removing large amounts of material in order to turn a more balanced form. Sometimes the wood we mount on the lathe is not in the proper proportions to enable us to turn an aesthetically pleasing form or shape.

When considering a design one of the first things to consider is whether function is more important than form. In other words is this an art piece or an everyday functional item. The old art verses function idea.

Some things to think about when beginning a design are; the height verses the width, rim diameter verse the base diameter, thick or thin walls, height of the shoulder, convex shape verse concave shape, squat form as in it looks heavy and the bottom looks as though it is attached to the table verse a floating form where the bottom curve ends under the foot giving the visual effect of the object floating on the table top all of these thoughts can be refined by using the Golden Section as an aid to good proportion. Another point to keep in mind is that you do not have to use the whole piece of wood that you have mounted on the lathe for your creation. Sometimes it is best to sacrifice some of the excess wood to improve the proportions of your design.

When creating an object, consider the concept of the pyramids where the larger heavier parts are located at the bottom and the shape or form gets smaller as it rises to the top. Or in the case of a Hollow Globe ornament with an icicle, the parts of the icicle i.e. the elements of design such as the tear drops and beads start out small and as they near the base of the globe they get larger. This same concept can be applied to color variations as well. Keep in mind that our eyes and brain are constantly looking for patterns especially familiar patterns. The inverse works just as well where the bottom is small and the elements get larger as they near the top of the object.

Try using plastic tubing to create or demonstrate a fare curve. A rubber hose would work. Michael Fortune has a good article in Fine Woodworking issue #199 "*Precise Tools for Drawing Curves*" on ways to draw or mark flowing curves in furniture. The use of a chain to produce a catenary curve is also very effective.

Materials & Tools for Embellishing Woodturnings

The following list of suggested tools & materials is optional, as these are just some of the tools and materials that we can experiment and play with while exploring the embellishment and coloring of our woodturnings.

Suggested Tools:

- Sorby Detail Tool
 - Various Cutters for the Sorby Detail Tool
- Sorby Micro Detail Tool be sure to order the Texturing wheel for this tool
- Wagner Detail Tool
- Chatter Tool
- Proxon Grinder
 - Various cutters and attachments for Proxon Angle Grinder
- Proxon Carving Tool
- Rasps
- Diamond Micro Rasp Various sizes and shapes

Suggested Materials:

- Inks
- Dyes, alcohol, Leather alcohol & water based, metallic
- Paints
 - Goldens Fluid Acrylics
 - Black Gesso
 - Automotive acrylics
 - Black Bumper paint
- Liming Wax
- Air Brushing Tools, paints etc.
- Art Clay Silver Materials
- Stones, Gems, for inserts
- Gold leaf, Copper leaf and Gold Leaf Tools & Materials