

Making Christmas tree Ornaments

Goals:

- To introduce simple tool making concepts
- Develop skill in simple hollowing activity
- Make small finials
- Assemble a complete ornament

Tools:

- Gouges
- Orb hollowing tools
- Skew chisel
- Vernier calipers
- 3/8 & 1/32 drills and Jacobs chuck
- Four-jaw scroll chuck

Material:

- A selection of used Allan wrenches
- 1 ½ x 1 ½ x 5 hardwood for tool handle
- 2 ½ x 2 ½ x 4 inch hardwood orb blank
- 1 x 1 x 5 finial blank contrasting hardwood

Supplies:

- Oil finish for orb
- Friction polish for finials
- Brass eyelets or fine brass wire for same
- Medium CA glue

Discussion:

This course covers three separate concepts, making a tools, hollowing an orb, and shaping a finial. Each concept is expected to be completed within one 3-hour session. One additional session is included to allow for varying rates of student accomplishment.

The hollowing tool can be used as assembled and sharpened or it can also be heat treated to improve its cutting qualities. If treated, MAP gas, fire bricks and work under the welding hood area is necessary.

Session One – Tool Making

Activity	Content	Preparation	Material required	Time required
Opening introduction	Welcome participants <ul style="list-style-type: none"> • Discuss course objectives • Complete paperwork • Review intro lecture points 	Collect signed releases	TOPs forms	15 min
Demonstrate tool making steps	<ul style="list-style-type: none"> • Shape Allen wrench on grinder • Round shaft • Turn wood handle • Drill receiving hole • Glue in Allen wrench 	<ul style="list-style-type: none"> • Pliers to hold Allen wrenches • Cut handle blanks 	<ul style="list-style-type: none"> • Collect Allen wrenches • Handle stock 	20 min
Activity – make tools	<ul style="list-style-type: none"> • Pass out supplies • Monitor work progress • Assist in grinding wrenches 	<ul style="list-style-type: none"> • Set up glue area • Put out CA glue 		60 min
Demonstration – tool sharpening	<ul style="list-style-type: none"> • Demonstrate sharpening the tool 	Same	None	10 min
Activity – Tool completion	Students sharpen their tools	None	Grinders	15 min
Debrief	Discuss lesson learned Discuss activity for the following week			15 min

Session Two – Making/hollowing an orb

Activity	Content	Preparation	Material required	Time required
Opening introduction	<ul style="list-style-type: none"> • Discuss orbs shapes • Discuss tools to shape 	Cut orb blanks	Hardwood blanks	15 minutes
Demonstrate mounting and shaping an orb	<ul style="list-style-type: none"> • Mount blank • Shape and drill hole completely through orb 	<ul style="list-style-type: none"> • Wood and scroll chuck 	<ul style="list-style-type: none"> • 	15 min
Activity – mount and prepare orb body	<ul style="list-style-type: none"> • Pass out supplies • Monitor work progress • Stop before hollowing 	<ul style="list-style-type: none"> • Hardwood blank ready 		45 min
Demonstration – hollowing process	<ul style="list-style-type: none"> • Demonstrate using the Allen tool to hollow orb • Sand (As required) • Finish with oil 		<ul style="list-style-type: none"> • Hollowing tool • Calipers to measure • Sand paper • Oil finish 	15 min
Activity – Hollow orbs	Students use tool and calipers to hollow, sand and finish		Calipers	45 min
Debrief	Discuss lesson learned Discuss activity for the following week			15 min

Session three – Turning finials

Activity	Content	Preparation	Material required	Time required
Opening introduction	<ul style="list-style-type: none"> • Discuss shapes for top and bottom finials 	Prepare finial blanks	Hardwood blanks	15 minutes
Demonstrate mounting and turning the bottom finial	<ul style="list-style-type: none"> • Mount blank bring up tail stock • Shape finial • Turn tenon to fit 3/8 hole in orb • Sand & finish • Part off 	<ul style="list-style-type: none"> • Wood and scroll chuck • Calipers 	<ul style="list-style-type: none"> • Hardwood blank • Sand paper • Friction polish • Paper towels 	15 min
Activity – mount and prepare orb body	<ul style="list-style-type: none"> • Pass out supplies • Monitor work progress 	<ul style="list-style-type: none"> • Hardwood blank ready 		60 min
Demonstration – turning top finial	<ul style="list-style-type: none"> • Extend the remaining blank and shape top finial • Drill hole for hanger 	<ul style="list-style-type: none"> • Prepare 1/32 drill and chuck 	<ul style="list-style-type: none"> • Drill & 1/32 bit 	10 min
Activity – Turn top finial	Students complete top finial and drill	<ul style="list-style-type: none"> • Same 	<ul style="list-style-type: none"> • Medium CA glue • Brass wire 	45 min
Demonstrate – Assembly	Glue finials into orb Glue brass wire into top finial	<ul style="list-style-type: none"> • Cut brass wire to length 	Set up glue area	10 min
Activity – Product assembly	Students complete project			20 min
Debrief	Discuss lesson learned Discuss activity for the following week			15 min

Session Four – second project or make up time

Activity	Content	Preparation	Material required	Time required
Opening introduction	<ul style="list-style-type: none"> • Discuss issues discovered 	Ad. Lib.		15 minutes
Discuss session objectives	<ul style="list-style-type: none"> • Complete project • Start another to focus on areas of difficulty 	<ul style="list-style-type: none"> • All materials 	<ul style="list-style-type: none"> • All 	5 min
Activity – Complete projects –start another	<ul style="list-style-type: none"> • Pass out supplies • Monitor work progress 			120 min
Discussion – Next steps	Students discuss what they will attempt at home			10 min
Debrief	Complete Workshop Evaluation	Evaluation forms printed		15 min