

Advanced Cabinetmaking

Module 1, Task 8	Course of Study Crosswalk:	AC 2
Module	Finishing Surfaces	
Task / Topic	Apply varnish	
Content Standard	The student will prepare surfaces for finishing.	
Evaluation	Given the necessary equipment, tools, and supplies, the student will apply varnish. All safety precautions must be followed. The finished project must be brushed or rolled in the correct manner, with no bubbles or brush marks on the surface.	
Resources (Materials, Equipment, Technology)	Various types of varnish MSDS descriptions for varnish Brushes Rags Mineral spirits Turpentine Respirator Surface for varnishing	
Lesson Length		
Instructional Method		
<input type="checkbox"/> Lecture <input type="checkbox"/> Class Discussion <input type="checkbox"/> Team Work <input type="checkbox"/> Review <input type="checkbox"/> Demonstration <input type="checkbox"/> Multimedia <input type="checkbox"/> Individual Work <input type="checkbox"/> Other		
Assessment Strategy		
<input type="checkbox"/> Homework <input type="checkbox"/> Written Test <input type="checkbox"/> Teacher Observation <input type="checkbox"/> Other <input type="checkbox"/> Class work <input type="checkbox"/> Performance Test <input type="checkbox"/> On-Task Ability <input type="checkbox"/> Other		
Integrated Content Code		
<input type="checkbox"/> R <input type="checkbox"/> SS <input type="checkbox"/> IR <input type="checkbox"/> PS <input type="checkbox"/> VSO <input type="checkbox"/> MS <input type="checkbox"/> Other <input type="checkbox"/> W <input type="checkbox"/> M <input type="checkbox"/> CL <input type="checkbox"/> CT <input type="checkbox"/> LD <input type="checkbox"/> WA <input type="checkbox"/> C <input type="checkbox"/> S <input type="checkbox"/> DM <input type="checkbox"/> IM <input type="checkbox"/> ES <input type="checkbox"/> TW		

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Module 1, Task 8

Classroom Theory (*Procedures/Activities/Learning Experiences*)

1. Explain safety procedures when working with various finishing materials.
 - a. Wear a respirator when working with varnish, sealers, stains and lacquer finishes.
 - b. Wear chemical treated gloves when using these finishes.
 - c. Avoid getting any material on the body.
 - d. Wash body immediately with proper solvent when exposed to finish.
 - e. Clean brushes, sprayers and equipment with the proper solvent immediately after use.
 - f. Always read and follow the manufacturer's directions.
 - g. Never paint in an enclosed area without adequate ventilation.
2. Explain chemical properties in varnish.
 - a. Varnish is a solution of gum with natural or synthetic resins in oil or in a volatile solvent which dries on exposure to air, forming a thin, hard usually glossy finish.
 - b. May be transparent, translucent, or tinted in color.
3. Explain the types of varnish available and their use.
 - a. Phenolic Resin - A varnish is made with phenol (a plastic) and formaldehyde. The phenol is a solid and is made into liquid by heating it with oil and then adding in the other ingredients. When the finish is applied in a thin film and exposed to the air, the solvent will evaporate and it will turn back to its solid form.
 - b. Alkyd Resin - A type of polyester resin that is combined with alcohol and acid. It is also cooked with oil to create a varnish. This is the most commonly used resin in commercial varnishes today.
 - c. Polyurethane - An oil based varnish, that has become one of the most commonly used resins in the manufacturing of many wood finishes. Polyurethane is a very tough, abrasion resistant resin.
4. Describe the advantages of varnish.
 - a. Dries on exposure to air
 - b. Forms a thin, hard, usually glossy surface
 - c. Mostly used for the protection or decoration of surfaces
5. Describe the disadvantage of using varnish.
 - a. Slow drying time
 - b. Dust will settle into the finish
 - c. Tends to turn yellow over time
 - d. Is not good for exterior finishing
6. Explain the uses of varnish in the construction area.
 - a. Varnish is used mostly for finishing stained areas such as molding cabinets and bookshelves.
 - b. Varnish is a good finish for wooden floors that are unfinished or floors that need to be re-finished.
 - c. Varnish is also used on wooden stairs inside a building.
7. Discuss proper procedures for applying varnish.

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Module 1, Task 8	Lab Demonstration (<i>Procedures/Activities/Learning Experiences</i>)
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| <ol style="list-style-type: none">1. Select dust free area to brush or roll varnish2. Select type varnish.3. Remove top, do not stir or shake.4. Place brush or roller in container and apply to surface moving brush or roller in one direction only.5. Do not use back and forth motions to distribute varnish. (This will cause air bubbles)6. Allow to dry as directions indicate.7. Check for any defects after drying. |
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Module 1, Task 8	Provision for Individual Differences
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<input type="checkbox"/> Check work in progress	<input type="checkbox"/> Monitor Assignments	<input type="checkbox"/> Multi-sensory Approach
<input type="checkbox"/> Immediate Feedback	<input type="checkbox"/> Review Sessions	<input type="checkbox"/> Modified Content
<input type="checkbox"/> Pre-teach Content	<input type="checkbox"/> Review Directions	<input type="checkbox"/> Study Partner
<input type="checkbox"/> Oral Reminders	<input type="checkbox"/> Provide Lecture Notes	<input type="checkbox"/> Personalized Examples
<input type="checkbox"/> Extension of Time	<input type="checkbox"/> Other	<input type="checkbox"/> Other

Extension	
Remediation	
Accommodation	
Modification	