2026 CABINETRY AND FINE WOODWORKING

Program Standards

CONTENT STANDARD 1.0: PROFESSIONAL ORGANIZATIONS AND LEADERSHIP	
Performance Standard 1.1: Student Leadership in Career Technical Student Organizations (CTSO) and Professional Associations	
1.1.1	Explore the role of professional organizations and/or associations in the Cabinetry and Woodworking Industry.
1.1.2	Define the values, roles, and opportunities provided through career technical student organizations.
1.1.3	Engage in career exploration and leadership development.
CONTENT STANDARD 2.0: LAB ORGANIZATION AND SAFETY SKILLS	
Performance Standard 2.1: General Safety	
2.1.1	Describe general shop safety rules, procedures and housekeeping duties.
2.1.2	Describe the roles of the Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA) pertaining to workplace safety.
2.1.3	Describe the requirements for using personal protective equipment (PPE) during work activities, including safety glasses, ear protection, gloves, and shoes.
2.1.4	Wear appropriate clothing for lab/shop activities.
2.1.5	Secure hair and jewelry for lab/shop activities.
2.1.6	Describe proper lifting procedures and proper use of support equipment.
2.1.7	Describe ventilation requirements for working within the lab/shop area.
2.1.8	Describe the location and procedures for using types of fire extinguishers and other fire safety equipment.
2.1.9	Identify the location and procedures for using eye wash stations.
2.1.10	Identify the location of the posted building diagram for evacuation routes.
2.1.11	Identify the location of safety data sheets (SDS) and the information they contain.
2.1.12	Complete work assignments, following verbal and written instructions.
2.1.13	Describe the requirements of the OSHA-10 safety course.
CONTENT STANDARD 3.0: HAND AND POWER TOOLS	
Performance Standard 3.1: Hand Tools	
3.1.1	Identify hand tools common to cabinetmaking and woodworking.
3.1.2	Demonstrate safe and proper techniques for using hand tools.
3.1.3	Maintain hand tools (i.e., cleaning, storing, identifying defects).
Performance Standard 3.2: Power Tools and Machinery	
3.2.1	Identify power tools and machinery common to cabinetmaking and woodworking.
3.2.2	Demonstrate safe and proper techniques for using power tools and machinery.
3.2.3	Maintain power tools and machinery (i.e., cleaning, storing, identifying defects).
3.2.4	Apply appropriate cut speeds and feed rates, based on materials and operation.
CONTENT STANDARD 4.0: FUNDAMENTAL DESIGN	
Performance Standard 4.1: Elements of Design	
4.1.1	Describe the history and characteristics of cabinetry and furniture design styles.
4.1.2	Describe elements of design (e.g., shapes, textures, lines, colors).
4.1.3	Describe principles of design (e.g., harmony, symmetry, repetition, balance, proportion).
4.1.4	Identify designed components (i.e., consumer choices) of cabinets and furniture.

4.1.5 Describe the relationship between the function and form of a cabinet or piece of furniture.
4.1.6 Identify common dimensions of furniture and cabinets.
4.1.7 Describe practical consumer requirements for cabinets and furniture in everyday living.
4.1.8 Describe common design modifications and requirements of the Americans with Disabilities Act (ADA).
4.1.9 Plan a finished product based on client requirements and specifications.

Performance Standard 4.2: Print Reading Techniques

4.2.1 Interpret basic elements of plans and prints (e.g., annotation, dimensions, line types).
4.2.2 Define industry standard print reading terminology.
4.2.3 Describe types of drawings (e.g., assembly, pictorial, orthographic, isometric, schematic).
4.2.4 Identify components of plans and prints (e.g., dimensioning, sectional drawings, fasteners, tables, charts, assembly drawings).
4.2.5 Create a materials list from plans and prints.
4.2.6 Create a plan of procedure.
4.2.7 Create a cut list from plans and prints.

Performance Standard 4.3: Measuring Techniques

4.3.1 Identify industry standard units of measure (e.g., standard, decimal, metric).
4.3.2 Define industry standard measurement terms (e.g., board feet, linear, square feet).
4.3.3 Measure to the nearest 1/16th inch with a tape measure.
4.3.4 Measure geometric shapes (e.g., arcs, circles, angles, compound angles, tapers).

Performance Standard 4.4: Mathematical Concepts

4.4.1 Convert between imperial and metric measurements.
4.4.2 Add, subtract, multiply and divide fractions, decimals, and whole numbers.
4.4.3 Convert between fractions and decimals.
4.4.4 Determine the cost of materials needed for a furniture/cabinetmaking project.

Performance Standard 4.5: Layout Principles and Practices

4.5.1 Interpret drawing, sketch, and specification information.
4.5.2 Prepare work area for layout.
4.5.3 Select materials and tools to complete work assignment.
4.5.4 Lay out project, using layout and marking tools.

CONTENT STANDARD 5.0: MATERIALS AND HARDWARE

Performance Standard 5.1: Materials

5.1.1 Identify the major materials used in furniture and cabinetmaking (e.g., hardwood, softwood, composites, laminates, veneers, edge treatment) and their characteristics.
5.1.2 Define materials terminology (e.g., kiln dry, grain, defect, lumber grade, face grade, sanded).
5.1.3 Describe environmental impacts related to material choice.
5.1.4 Describe how environmental conditions and climate can affect materials.
5.1.5 Describe how production is affected by the availability, quality, and quantity of resources.
5.1.6 Compare applications of raw materials, standard stock, and finished products.

Performance Standard 5.2: Fasteners and Methods

5.2.1 Identify fasteners (e.g., type, purpose, application).
5.2.2 Categorize fastening methods by their applications.
5.2.3 Describe fastening methods for materials (e.g., toenailing, countersinking, pocket screws, dowels, biscuits, dominos).

Performance Standard 5.3: Adhesives and Methods

5.3.1 Identify various adhesives (e.g., glues, contact adhesives, edge banding adhesives).
5.3.2 Define common terminology (e.g., open assembly time, closed assembly time, shelf life).
5.3.3 Describe adhesive methods for materials.

5.3.4 Compare adhesive characteristics that affect assembly time, cure time, and strength of the product.
5.3.5 Demonstrate cleanup procedures for common adhesives.

Performance Standard 5.4: Hardware

5.4.1 Describe common types of hardware (e.g., hinges, handles, drawer slides, knobs, pulls) and their applications.
5.4.2 Lay out hardware selected for the application.
5.4.3 Install and adjust hardware, as needed.

CONTENT STANDARD 6.0: MANUFACTURING PROCESSES

Performance Standard 6.1: Manufacturing

6.1.1 Describe current manufacturing processes (e.g., lean manufacturing, layout, milling, joinery, sanding, assembly, finishing, installation).

Performance Standard 6.2: Milling Operations

6.2.1 Identify terms used with milling tools (e.g., kerf, grain, drilling, boring, counterboring, countersinking).
6.2.2 Select milling tools for specific operations (e.g., table saw, drill press, joiner, band saw, jigsaw, router).
6.2.3 Square a board.
6.2.4 Cut lumber and sheet goods, using safe handling techniques.
6.2.5 Cut material, using a jig and template.
6.2.6 Perform operations on workpieces, using select safety devices (e.g., feather boards, holders, power feeders).

Performance Standard 6.3: Computer Numerical Control (CNC)

6.3.1 Describe the applications of CNC technology.
6.3.2 Define the programming and setup of CNC.
6.3.3 Describe common CNC problems and troubleshooting methods.
6.3.4 Compare the advantages and disadvantages of using CNC.

Performance Standard 6.4: Joinery Techniques

6.4.1 Identify terminology associated with joinery techniques (e.g., doweling, blind dado, confirmat, floating tenon, tongue & groove, dado/rabbet, miter, dovetail).
6.4.2 Compare the advantages and disadvantages of joinery types.
6.4.3 Select the joinery type, joinery tools, and machinery best suited for specific operations.
6.4.4 Construct dado, miter, rabbet, and butt joints.

Performance Standard 6.5: Sanding

6.5.1 Define terms used with sanding processes and techniques (e.g., grit, belt, disc, hand).
6.5.2 Prepare a surface for treatment or finish.
6.5.3 Describe application methods for various types of filler materials.
6.5.4 Select the best tool and abrasive for shaping and smoothing materials.
6.5.5 Select the grit number and sequences for shaping and smoothing operations.
6.5.6 Describe health and safety procedures that should be followed when working with abrasives and fillers.

Performance Standard 6.6: Assembly

6.6.1 Define terms used with assembly procedures (e.g., dry fitting, clamping, gluing).
6.6.2 Select the best assembly tools for specific operations (e.g., c-clamps, bar clamps, pipe clamps).
6.6.3 Demonstrate assembly and clamping procedures.
6.6.4 Assemble a project, using common case construction techniques (e.g., face frame, frameless).
6.6.5 Assemble a project, using common frame and panel construction techniques (e.g., stile, rail, panel).
6.6.6 Assemble a project, using furniture construction techniques.

6.6.7 Construct a project that includes a drawer and a door.
6.6.8 Check the accuracy and squareness of a project, using specific quality control criteria.
6.6.9 Apply laminates (e.g., plastic, veneers, edge treatment) to a project.

Performance Standard 6.7: Finishing

6.7.1 Identify terms and products used in finishing procedures (e.g., staining, clear coating, solvent, water-based).
6.7.2 Select finishing tools and materials for specific operations.
6.7.3 Apply various finishes, using application methods.
6.7.4 Clean up finishing products and equipment.
6.7.5 Describe health and safety procedures that should be followed when working with finishes.

Performance Standard 6.8: Cabinet Installation

6.8.1 Describe cabinet layout and installation techniques.
6.8.2 Describe countertop layout, materials, and installation techniques.
6.8.3 Check walls and floors for level and plumb.
6.8.4 Determine fasteners needed for walls.
6.8.5 Describe upper and lower cabinets installation (e.g., other casework, mantels, floating shelves, hood vents).
6.8.6 Describe countertop installation.
6.8.7 Install molding and trim.
6.8.8 Adjust doors and drawers.

CONTENT STANDARD 7.0: CABINETRY AND MILLWORK INDUSTRY

Performance Standard 7.1: Career Exploration

7.1.1 Describe employment opportunities in the industry.
7.1.2 Describe the economic variables affecting the industry.
7.1.3 Create a project portfolio.
7.1.4 Describe education and training options for various career pathways in the industry.
7.1.5 Describe worker's rights and responsibilities.

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