

Identifier	Poplar - Apprentice - Wood		Introduced	Completed
A W 1	<b>SAFETY AND EQUIPMENT</b>			
A W 1.1.01	General Rules	Identify potential general lab and worksite safety hazards.		
A W 1.1.02	General Rules	Identify basic first aid procedures for treating cuts, burns, and electrical shock.		
A W 1.1.03	General Rules	List the regulatory agencies that govern job-site safety.		
A W 1.1.04	General Rules	List the four (4) basic classifications of fires and the proper use of fire extinguishers.		
A W 1.1.05	General Rules	Identify basic personal protection equipment.		
A W 1.1.06	General Rules	Identify emergency evacuation procedures.		
A W 1.2.01	Tools	Identify hand and power tools based on the name and intended use.		
A W 2	<b>MATHEMATICS</b>			
A W 2.1.01	Use	Add, subtract, multiply, and divide whole numbers.		
A W 2.1.02	Use	Measure to the nearest 1/32 inch.		
A W 2.1.03	Use	Measure to the nearest millimeter.		
A W 2.1.04	Use	Add, subtract, multiply and divide fractions, decimals and whole numbers.		
A W 2.1.05	Use	Convert fractions to decimals.		
A W 2.1.06	Use	Calculate percentages and ratios.		
A W 3	<b>PLANNING AND DESIGN</b>			
A W 3.1.01	Elements of Design	Discuss the importance of function and form for furniture and cabinetmaking.		
A W 3.1.02	Elements of Design	Identify alternative designs with convenience and flexibility.		
A W 3.1.03	Elements of Design	Explain the decision-making process for furniture and cabinetmaking.		
A W 3.1.04	Elements of Design	Identify the three levels of design: copying, adapting, and creating.		
A W 3.2.01	Styles	Identify various forms of cabinet and furniture styles.		
A W 3.2.02	Styles	Describe the ergonomics/human factors that affect furniture and cabinet design.		
A W 3.3.01	Drafting/ Blueprints	Identify drafting tools and their uses.		
A W 3.4.01	Bill of Materials	Read a bill of materials from an existing plan.		
A W 3.4.02	Bill of Materials	Interpret standard industry abbreviations (i.e., S2S, RW&L, KD, 6/4).		
A W 3.5.01	Estimating	Compare board feet, square feet, and linear feet.		
A W 3.5.02	Estimating	Read and interpret a price list.		
A W 3.5.03	Estimating	Demonstrate the ability to locate a building material supplier.		
A W 3.6.01	Project Planning	List the steps to square a board.		
A W 3.6.02	Project Planning	Explain the elements and importance of a plan of procedures.		
A W 4	<b>TOOL USAGE AND SELECTION</b>			
A W 4.1.01	Measurement/ Layout	Read a ruler and measure to the nearest 1/32 inch.		
A W 4.1.02	Measurement/ Layout	Read a ruler and measure to the nearest millimeter.		
A W 4.1.03	Measurement/ Layout	Identify commonly used measuring and layout tools (i.e., measuring tools, squares, gauges, dividers, calipers)		
A W 4.1.04	Measurement/ Layout	Identify common layout and measurement terms (i.e., squareness, concentricity, perpendicular, parallel)		
A W 4.2.01	Cutting	Identify the various types and kinds of cutting tools, (i.e., hacksaw, backsaw, compass saw, coping saw, dovetail saw, keyhole saw, crosscut saw, ripsaw, cabinet scraper).		
A W 4.2.02	Cutting	Identify terms used with cutting tools (i.e., kerf, set, grain and TPI).		
A W 4.3.01	Striking	Identify various types of striking tools, (i.e., hammers, mallets, nail sets, chisels, punches).		
A W 4.4.01	Boring	Identify various types of shaping and boring tools and their uses (i.e., auger bit, Forstner bit, masonry drill bit, multi-spur bit, plug cutter, spade bit, twist drill bit, single taper twist bit and countersink bit).		
A W 4.4.02	Boring	Identify common terms (i.e., drilling, boring, counter boring and countersinking).		
A W 4.5.01	Shaping	Identify various types of hand shaping tools and their uses (i.e., draw knife, planes, spokeshave, rasps, files, carving tools, chisel and surfom).		
A W 4.5.02	Shaping	Identify terms used with hand-shaping tools (i.e., concave, convex, radius, bevel, taper and profile).		
A W 4.6.01	Clamping	Identify various clamping tools (i.e., c-clamp, bar clamp, bench vise, band clamp, face frame clamp, web clamp, vacuum bag, hand-screw clamp, spring clamp).		
A W 5	<b>POWER TOOLS</b>			
A W 5.1.01	Portable	Identify common portable power tools (i.e., saws, drills, sanders, routers, nailers and plate joiners).		
A W 5.2.01	Stationary	Identify common stationary power tools, (i.e., saw, jointer, planer, sander, lathe, drill press, shaper).		
A W 6	<b>JOINERY, FASTENERS, ADHESIVES</b>			
A W 6.1.01	Metallic	Identify the various metallic fasteners and nomenclature used in the furniture and cabinetmaking industry (i.e., screws, nails, bolts, staples and anchors).		
A W 6.1.02	Metallic	Identify general techniques (i.e., toe nailing, countersinking and pocket screws).		
A W 6.2.01	Dowels/ Biscuits	Identify the various types and sizes of biscuits and dowels used.		
A W 6.2.02	Dowels/ Biscuits	Identify the advantages and disadvantages of dowel and biscuit joinery.		
A W 6.3.01	Adhesives	Describe the types of adhesives used in the furniture and cabinetmaking industry, (i.e., aliphatic resins, Polyvinyl, contact cement, urethane, epoxy and thermal setting).		
A W 6.3.02	Adhesives	List and define common terminology to include: open assembly time; closed assembly time; cure time; slip and shelf life.		

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A W 6.4.01	Joints	Identify the types of wood joints, (i.e., butt, edge, rabbit, dado, miter, mortise and tenon, lap and dovetail).		
A W 7	<b>MATERIALS</b>			
A W 7.1.01	Hardwoods/ Softwoods	Identify characteristics of wood (i.e., open grain, close grain, texture, smell and color).		
A W 7.1.02	Hardwoods/ Softwoods	Identify common terms, (i.e., moisture content, air dry, kiln dry, lumber grades and lumber surfacing).		
A W 7.1.03	Hardwoods/ Softwoods	Identify price considerations of various hardwoods and softwoods.		
A W 7.2.01	Sheet Goods	Identify various types of sheet goods (i.e., plywood, melamine, particle board, fiber board and hardboard).		
A W 7.2.02	Sheet Goods	Identify the various grading designations (i.e., good one side, shop, density, interior and exterior).		
A W 7.2.03	Sheet Goods	Identify the common sizes of sheet materials.		
A W 7.2.04	Sheet Goods	Identify price considerations of various sheet goods.		
A W 7.3.01	Surfaces	Identify the different edge treatments for laminating.		
A W 7.3.02	Surfaces	Identify common terms (i.e., postform, substrate and self-edge).		
A W 7.3.03	Surfaces	List the advantages of using laminates.		
A W 7.3.04	Surfaces	List the limitations of laminates.		
A W 7.4.01	Veneers	Identify the different edge treatments for veneers.		
A W 7.4.02	Veneers	Identify common terms (i.e., vacuum press, marquetry, parquetry, inlay and pattern matching).		
A W 7.4.03	Veneers	List the advantages of using veneers.		
A W 7.4.04	Veneers	List the limitations of veneers.		
A W 8	<b>CONSTRUCTION</b>			
A W 8.1.01	Furniture	Identify common furniture construction terms (i.e., stile, rail, grain pattern, mullion).		
A W 8.2.01	Cabinetry	Identify common terms used in cabinet construction (i.e., grain direction, web frame, stiles and rails, joints and doors).		
A W 8.2.02	Cabinetry	Identify common door styles and construction techniques.		
A W 8.2.03	Cabinetry	Identify common drawer styles and construction techniques.		
A W 8.2.04	Cabinetry	Identify what type of case construction is appropriate for a specific project.		
A W 8.3.01	Manufacturing	Identify common terms (i.e., jigs and fixtures, quality assurance, quality control, CNC, templates, mass production, flow chart and critical path).		
A W 8.3.02	Manufacturing	Identify the advantages and disadvantages of mass production cabinets versus custom-built cabinets.		
A W 8.3.03	Manufacturing	Identify mass production processes used in the furniture and cabinetmaking industry.		
A W 8.4.01	Hardware	Identify common terms (i.e., hinge, knobs, pulls, slide, European, caster, latch and locks).		
A W 8.4.02	Hardware	Identify common types of hardware (i.e., drawer hardware, door hardware, bottom and side mounts and case mounts).		
A W 8.5.01	Plastics	Identify various plastic laminates used in the furniture and cabinetmaking industry.		
A W 8.5.02	Plastics	Identify a minimum of three (3) different edge treatments.		
A W 8.5.03	Plastics	Identify appropriate tools for shaping laminates.		
A W 9	<b>FINISHING</b>			
A W 9.1.01	Abrasives	Identify the various types of natural and synthetic abrasives.		
A W 9.1.02	Abrasives	Identify the different grading systems for abrasives (i.e., steel wool, grit system, paste abrasives, backing and adhesives).		
A W 9.1.03	Abrasives	Identify common terms (i.e., open coat, close coat, and non-loading).		
A W 9.1.04	Abrasives	Identify different forms/shapes of abrasives (i.e., disc, belts, sheets, strips and drums).		
A W 9.2.01	Stains	Describe the various ways of applying stains.		
A W 9.2.02	Stains	Describe the proper ways to prepare a surface before applying stains.		
A W 9.2.03	Stains	Identify the various types of stains.		
A W 9.2.04	Stains	Identify common terms (i.e., vehicle, pigment, bleeding and coverage).		
A W 9.3.01	Sealers	Describe the various ways of applying sealer and finish coats.		
A W 9.3.02	Sealers	Describe the proper ways to prepare a surface before applying a sealer or finish coat.		
A W 9.3.03	Sealers	Identify the various types of sealer and finish coats.		
A W 9.3.04	Sealers	Identify common terms (i.e., gloss, sheen, sealer and topcoat).		
A W 9.4.01	Fillers	Describe the various ways of applying filler materials.		
A W 9.4.02	Fillers	Describe the proper ways to prepare a surface before applying a filler material.		
A W 9.4.03	Fillers	Identify the various types of filler materials.		
A W 9.4.04	Fillers	Identify common terms (i.e., putty, shellac, plastic wood and water-based filler).		
A W 10	<b>INSTALLATION</b>			
A W 10.1.01	Transporting	Identify proper lifting techniques.		
A W 10.1.02	Transporting	Identify proper packaging materials.		
A W 10.1.03	Transporting	Identify precautions to be used when transporting projects.		
A W 10.2.01	Layout/ Installation	Identify common cabinet installation terms (i.e., plumb, level, square, base cabinet, upper cabinet and tall cabinet).		
A W 10.3.01	Countertops	Define the terms: scribe, plumb, square and level.		
A W 10.3.02	Countertops	Identify hardware specific to countertops (i.e., draw bolts, sink clips).		
A W 10.4.01	Molding/ Trim	Identify different types of molding and trim.		

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A W 10.4.02	Molding/ Trim	Identify the appropriate tools, adhesives and fasteners used for the installation of moldings and trims.		
A W 10.4.03	Molding/ Trim	Identify the specific joints specific to molding and/or trim (i.e., coped, miter, compound miter and outside miter)		
A W 11	<b>EMPLOYABILITY SKILLS</b>			
A W 11.1.01	Problem Solving	Identify the basic steps in the problem-solving process.		
A W 11.1.02	Problem Solving	Identify alternative solutions to solve a problem.		
A W 11.1.03	Problem Solving	Identify the basic components of an action plan.		
A W 11.2.01	Critical Thinking	State the importance of critical thinking in identifying, analyzing, and solving a furniture and cabinetmaking problem.		
A W 11.2.02	Critical Thinking	Identify the essential steps of critical thinking.		
A W 11.2.03	Critical Thinking	Define emotional and logical thinking.		
A W 11.2.04	Critical Thinking	Identify the difference between opinions and statements of fact.		
A W 11.3.01	Speak, Write, Listen	Define communications.		
A W 11.3.02	Speak, Write, Listen	Explain the benefits of effective communication in the furniture and cabinetmaking trade.		
A W 11.3.03	Speak, Write, Listen	Explain how cultural and physical diversity affect communication.		
A W 11.3.04	Speak, Write, Listen	Identify applicable medium for conveying messages.		
A W 11.4.01	Technology	Recognize technology used in the furniture and cabinetmaking trades.		
A W 11.4.02	Technology	Use an Internet browser to locate specific Websites related to the furniture and cabinetmaking trades.		
A W 11.5.01	Leadership and Teamwork	Explain the importance of groups.		
A W 11.5.02	Leadership and Teamwork	Explain how to organize groups.		
A W 11.5.03	Leadership and Teamwork	Wear appropriate attire.		
A W 11.6.01	Ethics	Describe the importance of ethics in the workplace.		
A W 11.6.02	Ethics	Meet attendance standards.		
A W 11.6.03	Ethics	Describe an organized workplace.		
A W 11.6.04	Ethics	Identify appropriate responses to unethical actions.		
A W 11.7.01	Workplace	List effective time management skills.		
A W 11.7.02	Workplace	Utilize materials, tools, and processes to complete a task related to a career selection.		
A W 11.7.03	Workplace	Read and follow instructions from manuals on the use and care of materials, tools, and equipment.		
A W 11.7.04	Workplace	Maintain a clean, organized, and safe job site.		
A W 11.7.05	Workplace	Identify traits needed for cooperation and leadership in a team at school or in a workplace setting.		
A W 11.7.06	Workplace	Identify the material resources and space requirements needed to complete an assignment.		
A W 11.8.01	Career	Locate employment opportunities.		
A W 11.8.02	Career	Identify job requirements for entry-level positions in the furniture and cabinetmaking industry.		
A W 11.8.03	Career	Identify general conditions for employment.		
A W 11.8.04	Career	Identify educational/training requirements for related furniture and cabinetmaking fields.		
A W 11.8.05	Career	Identify the elements of goal setting.		
A W 11.8.06	Career	Identify furniture and cabinetmaking related careers.		
A W 11.8.07	Career	Describe essential job interview skills.		
A W 11.8.08	Career	Identify the components of a career portfolio.		
A W 11.9.01	Retention	Describe the importance of a portfolio.		
A W 11.9.02	Retention	Identify options for lifelong learning.		
A W 11.9.03	Retention	Identify interpersonal skills needed for job retention.		
A W 11.9.04	Retention	Identify jobs with opportunity for advancement.		
A W 11.9.05	Retention	Describe the importance of career planning.		