

Identifier	Poplar - Journeyman - Wood		Introduced	Completed
J W 1	<b>SAFETY AND EQUIPMENT</b>			
J W 1.1.01	General Rules	Demonstrate proper use of safety apparel at all times, including but not limited to, eye protection, hearing protection, skin protection, head protection, footwear and protection from airborne particulate matter.		
J W 1.1.02	General Rules	Demonstrate the safe handling, storage and disposal of chemicals, materials and adhesives in accordance with local, state, and federal safety and environmental regulations (OSHA, EPA, HazCom, MSDS, etc.)		
J W 1.1.03	General Rules	Demonstrate continuous awareness of potential hazards to self and others.		
J W 1.1.04	General Rules	Demonstrate appropriate construction-related safety procedures.		
J W 1.1.05	General Rules	Inspect extension cords for the presence of a functional ground connection prior to use.		
J W 1.1.06	General Rules	Place and secure ladders when appropriate.		
J W 1.1.07	General Rules	Demonstrate awareness of personnel and activities near the work area.		
J W 1.1.08	General Rules	Report hazards found on the job site to their supervisor/teacher.		
J W 1.1.09	General Rules	Explain basic first aid procedures for treating cuts, burns, and electrical shock.		
J W 1.1.10	General Rules	Demonstrate proper fall-protection practices and use of safety devices at all times.		
J W 1.2.01	Tools	Demonstrate the safe use and care of hand tools.		
J W 1.2.02	Tools	Demonstrate the proper operation of stationary power tools for an assigned task.		
J W 1.2.03	Tools	Perform basic maintenance on hand and power tools.		
J W 1.2.04	Tools	Demonstrate the proper operation of pneumatic tools.		
J W 1.2.05	Tools	Inspect power tools for intact guards, shields, insulation and other protective devices.		
J W 2	<b>MATHEMATICS</b>			
J W 2.1.01	Use	Check corner layouts using the diagonal method.		
J W 2.1.02	Use	Estimate board, square and linear feet using formulas and/or tables with a calculator.		
J W 2.1.03	Use	Estimate material costs.		
J W 3	<b>PLANNING AND DESIGN</b>			
J W 3.1.01	Elements of Design	Identify needs and wants in cabinets and furniture in everyday living.		
J W 3.1.02	Elements of Design	Identify common sizes in relation to furniture and cabinets.		
J W 3.1.03	Elements of Design	Apply design elements: shapes, textures, lines and colors to create functional and attractive furniture and cabinets.		
J W 3.1.04	Elements of Design	Apply principles of design, harmony, repetitions, balance and proportion.		
J W 3.1.05	Elements of Design	Describe the relationship between the function and form of a cabinet or piece of furniture.		
J W 3.1.06	Elements of Design	Identify the elements of kitchen floor plans.		
J W 3.2.01	Styles	Explain the progress of cabinetry and furniture styles from the 17 <sup>th</sup> century to today.		
J W 3.2.02	Styles	Identify various cabinet styles and components.		
J W 3.2.03	Styles	List characteristics of the styles that belong to traditional, provincial, and contemporary designs.		
J W 3.2.04	Styles	Identify various kitchen cabinet components.		
J W 3.3.01	Drafting/ Blueprints	Sketch a project using manual drawing techniques.		
J W 3.3.02	Drafting/ Blueprints	Use drafting tools to create a pictorial and working drawing.		
J W 3.3.03	Drafting/ Blueprints	Create cutting diagrams.		
J W 3.3.04	Drafting/ Blueprints	Read and interpret blueprints.		
J W 3.4.01	Bill of Materials	Develop a bill of materials list from a working drawing.		
J W 3.4.02	Bill of Materials	Develop a cutting list from a working drawing.		
J W 3.4.03	Bill of Materials	Evaluate an existing bill of materials for accuracy.		
J W 3.5.01	Estimating	Determine the cost of materials needed for a furniture/cabinetmaking project.		
J W 3.5.02	Estimating	Optimize available materials from a cutting diagram.		
J W 3.5.03	Estimating	Compare and contrast the cost of a specific project using different materials.		
J W 3.6.01	Project Planning	List the sequence of cutting.		
J W 3.6.02	Project Planning	List the sequence of assembly.		
J W 3.6.03	Project Planning	List the sequence of finishing steps.		
J W 4	<b>TOOL USAGE AND SELECTION</b>			
J W 4.1.01	Measurement/ Layout	Demonstrate the accurate use of common measuring and layout tools.		
J W 4.1.02	Measurement/ Layout	Select the proper layout tools for specific tasks.		
J W 4.2.01	Cutting	Select the proper cutting tools for specific operations.		
J W 4.2.02	Cutting	Demonstrate the safe and proper use of specific hand-cutting tools.		
J W 4.2.03	Cutting	Select tools for cutting curves and straight cuts.		
J W 4.2.04	Cutting	Select the most appropriate blade for a given operation.		
J W 4.3.01	Striking	Demonstrate the safe and proper use of specific striking tools.		
J W 4.3.02	Striking	Maintain striking tools (i.e., dressing, sharpening, grinding).		
J W 4.4.01	Boring	Select the proper boring tools for specific operations.		
J W 4.4.02	Boring	Demonstrate the safe and proper use of hand boring tools.		
J W 4.5.01	Shaping	Select the proper hand-shaping tools for specific operations.		
J W 4.5.02	Shaping	Demonstrate the safe and proper use of hand-shaping tools.		
J W 4.5.03	Shaping	Construct a working edge.		
J W 4.5.04	Shaping	Construct a working surface.		
J W 4.6.01	Clamping	Select proper clamping tools for specific operations.		

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J W 4.6.02	Clamping	Demonstrate safe and proper use of clamping tools.		
J W 4.6.03	Clamping	Demonstrate initial assembly and dry clamping procedures.		
J W 5	<b>POWER TOOLS</b>			
J W 5.1.01	Portable	Demonstrate the operation of portable power tools for an assigned task.		
J W 5.1.02	Portable	Perform basic maintenance on a portable power tool.		
J W 5.1.03	Portable	Pass a written safety test on the use of portable power tools.		
J W 5.1.04	Portable	Demonstrate a performance skills safety test.		
J W 5.1.05	Portable	Demonstrate the safe use of pneumatic power tools.		
J W 5.2.01	Stationary	Pass written safety tests on the use of stationary power tools.		
J W 5.2.02	Stationary	Pass performance-based skills safety tests.		
J W 5.2.03	Stationary	Perform basic and special set-up operations on stationary power tools.		
J W 5.2.04	Stationary	Demonstrate the proper operation of stationary power tools for an assigned task.		
J W 5.2.05	Stationary	Perform basic maintenance and care of stationary power tools.		
J W 6	<b>JOINERY, FASTENERS, ADHESIVES</b>			
J W 6.1.01	Metallic	Define the purposes for metallic fasteners in furniture and cabinetmaking.		
J W 6.1.02	Metallic	Select the proper metallic fasteners for specific applications.		
J W 6.1.03	Metallic	Demonstrate the proper use of metallic fasteners for specific applications.		
J W 6.2.01	Dowels/ Biscuits	Determine appropriate applications and sizes for dowels and biscuits.		
J W 6.2.02	Dowels/ Biscuits	Construct a dowel joint.		
J W 6.2.03	Dowels/ Biscuits	Construct a biscuit joint.		
J W 6.3.01	Adhesives	Select the proper adhesive(s) to construct wood joints used in furniture or cabinets.		
J W 6.3.02	Adhesives	Demonstrate the proper use and application of adhesives.		
J W 6.3.03	Adhesives	Demonstrate the proper cleanup procedures for specific adhesives.		
J W 6.3.04	Adhesives	Identify characteristics of adhesives that affect the assembly time, cure time and strength of the product.		
J W 6.4.01	Joints	Construct five (5) separate types of wood joints.		
J W 6.4.02	Joints	Compare and contrast joints commonly used in the cabinet and furniture making industries, (i.e., strength, appearance and ease of construction).		
J W 6.4.03	Joints	Select the correct type of wood joint used for a specific application and material.		
J W 6.4.04	Joints	Demonstrate the proper use of tools used in creating and applying specific wood joints.		
J W 7	<b>MATERIALS</b>			
J W 7.1.01	Hardwoods/ Softwoods	Define the difference between a hardwood and a softwood.		
J W 7.1.02	Hardwoods/ Softwoods	Identify a minimum of five (5) species of hardwood and its characteristics that are common to the furniture and cabinet industry.		
J W 7.1.03	Hardwoods/ Softwoods	Identify a minimum of five (5) species of softwood and its characteristics that are common to the furniture and cabinet industry.		
J W 7.1.04	Hardwoods/ Softwoods	Identify common defects found in wood and list possible solutions.		
J W 7.2.01	Sheet Goods	Identify a minimum of five (5) types of panel products used in the furniture and cabinetmaking industries.		
J W 7.2.02	Sheet Goods	Explain the use of various panel products and their uses in the furniture and cabinetmaking industries.		
J W 7.2.03	Sheet Goods	Describe the cutting and handling techniques used for sheet goods.		
J W 7.2.04	Sheet Goods	Compare and contrast the advantages and disadvantages of sheet goods versus solid wood stock.		
J W 7.3.01	Surfaces	Identify standard sizes of laminates.		
J W 7.3.02	Surfaces	Identify the grades of various laminates.		
J W 7.3.03	Surfaces	Identify substrates required for laminating.		
J W 7.3.04	Surfaces	Identify the proper adhesive required for applying laminate.		
J W 7.4.01	Veneers	Identify standard sizes of veneers.		
J W 7.4.02	Veneers	Identify the grades of various veneers.		
J W 7.4.03	Veneers	Identify substrates required for veneers.		
J W 7.4.04	Veneers	Identify the proper adhesive(s) required for applying veneers.		
J W 7.4.05	Veneers	Identify the types of pattern matching in veneers.		
J W 8	<b>CONSTRUCTION</b>			
J W 8.1.01	Furniture	Square a board to a specific size.		
J W 8.1.02	Furniture	Demonstrate common case construction.		
J W 8.1.03	Furniture	Demonstrate common frame and panel construction.		
J W 8.1.04	Furniture	Demonstrate common leg and rail construction.		
J W 8.2.01	Cabinetry	Square a board to a specific size.		
J W 8.2.02	Cabinetry	Construct a 32 millimeter case using appropriate construction techniques.		
J W 8.2.03	Cabinetry	Construct a case with a face frame using appropriate construction techniques.		
J W 8.2.04	Cabinetry	Construct a frameless case using appropriate construction techniques.		
J W 8.2.05	Cabinetry	Construct a cabinet drawer using appropriate construction techniques.		
J W 8.2.06	Cabinetry	Construct a cabinet door using appropriate construction techniques.		
J W 8.3.01	Manufacturing	Demonstrate the use of a jig, template or fixture in a mass production project.		
J W 8.3.02	Manufacturing	Use a specific quality control instrument to check the accuracy of a project.		

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J W 8.3.03	Manufacturing	Demonstrate the use of a mass production technique (i.e., parts duplication and assembly processes).		
J W 8.4.01	Hardware	Select the appropriate hardware for a specific project.		
J W 8.4.02	Hardware	Create a hardware schedule for a specific project.		
J W 8.4.03	Hardware	Layout, install and adjust the appropriate drawer hardware to include drawer slides and pulls.		
J W 8.4.04	Hardware	Layout, install and adjust the appropriate door hardware to include European and standard hinges.		
J W 8.5.01	Plastics	Prepare a substrate for bonding a laminate to a surface.		
J W 8.5.02	Plastics	Cut plastic laminates.		
J W 8.5.03	Plastics	Apply a plastic laminate to a surface using an appropriate adhesive.		
J W 8.5.04	Plastics	Trim laminate using a router and laminate file.		
J W 8.5.05	Plastics	Apply a minimum of three (3) different edge treatments.		
J W 8.5.06	Plastics	Use appropriate tools for shaping laminates.		
J W 9	<b>FINISHING</b>			
J W 9.1.01	Abrasives	Properly prepare a surface for treatment.		
J W 9.1.02	Abrasives	Select the proper abrasive for shaping and smoothing materials.		
J W 9.1.03	Abrasives	Select the proper grit sizes and sequences for shaping and smoothing operations.		
J W 9.1.04	Abrasives	Demonstrate the proper ways to keep abrasives clean.		
J W 9.1.05	Abrasives	Comply with the health and safety factors used in working with abrasives.		
J W 9.2.01	Stains	Select the proper type of stain for a specific application.		
J W 9.2.02	Stains	Demonstrate proper application methods for different types of stains.		
J W 9.2.03	Stains	Comply with the health and safety factors used in working with stains.		
J W 9.2.04	Stains	Demonstrate cleaning procedure for various types of stains.		
J W 9.3.01	Sealers	Demonstrate proper application methods for different types of sealers and finish coats.		
J W 9.3.02	Sealers	Select the proper type of sealer and finish coat for a specific application.		
J W 9.3.03	Sealers	Comply with the health and safety factors used in working with sealer and finish coats (i.e., spray booths, respirators, gloves and spray equipment).		
J W 9.3.04	Sealers	Demonstrate cleaning procedures for various types of sealer and finish coats.		
J W 9.4.01	Fillers	Demonstrate proper application methods for different types of filler materials.		
J W 9.4.02	Fillers	Select the proper type of filler material for a specific application.		
J W 9.4.03	Fillers	Comply with the health and safety factors used in working with filler materials.		
J W 9.4.04	Fillers	Demonstrate cleaning procedures for various types of filler materials.		
J W 10	<b>INSTALLATION</b>			
J W 10.1.01	Transporting	Package a project for shipping.		
J W 10.1.02	Transporting	Secure a packaged project for transportation.		
J W 10.1.03	Transporting	Transport a project from one location to another without damage.		
J W 10.2.01	Layout/ Installation	Layout a cabinet installation according to a floor plan.		
J W 10.2.02	Layout/ Installation	Layout a plumb line and a level line.		
J W 10.2.03	Layout/ Installation	Adjust a layout to plumb, square and level.		
J W 10.2.04	Layout/ Installation	Install a base cabinet.		
J W 10.2.05	Layout/ Installation	Install an upper cabinet.		
J W 10.3.01	Countertops	Create and adjust a layout to plumb, square and level.		
J W 10.3.02	Countertops	Scribe into a corner.		
J W 10.3.03	Countertops	Use appropriate fastening methods for attaching countertops to cabinets.		
J W 10.3.04	Countertops	Use a cut-in template.		
J W 10.4.01	Molding/ Trim	Layout and cut molding and/or trim to the appropriate angle and size for a specific application.		
J W 10.4.02	Molding/ Trim	Use the appropriate adhesives and fasteners to install a minimum of three (3) different types of trim and/or molding.		
J W 10.4.03	Molding/ Trim	Demonstrate the proper techniques to construct a miter (other than 90 degrees), a compound miter and a cope.		
J W 11	<b>EMPLOYABILITY SKILLS</b>			
J W 11.1.01	Problem Solving	Solve a furniture and cabinetmaking problem using the appropriate steps in the problem-solving process.		
J W 11.1.02	Problem Solving	Demonstrate brainstorming techniques.		
J W 11.1.03	Problem Solving	Examine and explain the advantages and disadvantages of alternative solutions to one or more problems.		
J W 11.1.04	Problem Solving	Create an action plan based upon a solution to a furniture and cabinetmaking problem.		
J W 11.1.05	Problem Solving	Identify the benefits of solving a furniture and cabinetmaking problem.		
J W 11.2.01	Critical Thinking	Identify and explain the essential elements of the critical-thinking process as related to the furniture and cabinetmaking trades.		
J W 11.2.02	Critical Thinking	Demonstrate critical-thinking skills necessary in the furniture and cabinetmaking trades.		
J W 11.2.03	Critical Thinking	Explain how emotional thinking and logical thinking affect decision making in the furniture and cabinetmaking trades.		
J W 11.2.04	Critical Thinking	Explain the difference between reliable and unreliable observations and statements of facts.		

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J W 11.2.05	Critical Thinking	Recognize patterns or relationships through observation and discovery.		
J W 11.3.01	Speak, Write, Listen	Explain the benefits of effective communication skills in the workplace.		
J W 11.3.02	Speak, Write, Listen	Effectively interpret and respond to verbal and nonverbal messages.		
J W 11.3.03	Speak, Write, Listen	Demonstrate proper telephone etiquette.		
J W 11.3.04	Speak, Write, Listen	Effectively communicate thoughts, ideas and information in writing.		
J W 11.3.05	Speak, Write, Listen	Organize ideas and communicate orally; is able to effectively demonstrate job skills to others.		
J W 11.3.06	Speak, Write, Listen	Locate, understand and interpret written information in documents such as manuals, graphs and schedules.		
J W 11.3.07	Speak, Write, Listen	Select and utilize an appropriate medium for conveying messages with dignity and respect.		
J W 11.3.08	Speak, Write, Listen	Organize information into the appropriate format in accordance with standard practices, which includes prewriting, drafting, proofreading, editing/revising, and preparing a final copy.		
J W 11.3.09	Speak, Write, Listen	Demonstrate sensitivity to cultural diversity in communication.		
J W 11.3.10	Speak, Write, Listen	Identify common communication barriers and methods for improving communication.		
J W 11.4.01	Technology	Demonstrate ability to utilize basic keyboarding techniques.		
J W 11.4.02	Technology	Demonstrate ability to utilize other input devices.		
J W 11.4.03	Technology	Demonstrate ability to utilize various electronic research methods.		
J W 11.4.04	Technology	Demonstrate knowledge of the basic technology systems currently available and how they apply to your field (i.e., word processing, spreadsheets, multimedia applications and databases).		
J W 11.4.05	Technology	Investigate and explain the use, benefits, and costs of technological developments in the workplace and school.		
J W 11.4.06	Technology	Identify and demonstrate the appropriate use of technology to enhance the efficiency of the workplace and school.		
J W 11.4.07	Technology	Demonstrate routine maintenance and repair of technological equipment.		
J W 11.5.01	Leadership and Teamwork	Work cooperatively with others when given group project.		
J W 11.5.02	Leadership and Teamwork	Explain traits necessary to effectively lead and influence individuals and groups.		
J W 11.5.03	Leadership and Teamwork	Demonstrate appropriate attitudes and behaviors for effective leadership.		
J W 11.5.04	Leadership and Teamwork	Demonstrate respect for team members, team processes, and team goals.		
J W 11.5.05	Leadership and Teamwork	Participate in the implementation of a group's decision and evaluate the results.		
J W 11.5.06	Leadership and Teamwork	Demonstrate the qualities of an effective leader and team member.		
J W 11.5.07	Leadership and Teamwork	Describe the importance of a proper dress code.		
J W 11.6.01	Ethics	Develop personal work ethics through work experience.		
J W 11.6.02	Ethics	Demonstrate correct ethics in the workplace.		
J W 11.6.03	Ethics	Demonstrate regular attendance, promptness, and the willingness to follow instructions and complete an assigned task.		
J W 11.6.04	Ethics	Demonstrate appropriate personal and professional attitudes and behaviors.		
J W 11.6.05	Ethics	Maintain a safe, clean, and organized work area.		
J W 11.6.06	Ethics	Demonstrate awareness of legal responsibilities related to individual performance, safety, and customer satisfaction.		
J W 11.6.07	Ethics	Demonstrate knowledge of various types of harassment.		
J W 11.7.01	Workplace	Develop a time schedule and prioritized task list to complete a job assignment.		
J W 11.7.02	Workplace	Identify the resources needed to complete a job assignment.		
J W 11.7.03	Workplace	Organize the material resources and space requirements needed to complete a job assignment.		
J W 11.7.04	Workplace	Effectively use technology to complete a job assignment.		
J W 11.7.05	Workplace	Demonstrate cooperation and leadership as a team at school or in a workplace setting.		
J W 11.7.06	Workplace	Use the basic components of effective time management.		
J W 11.7.07	Workplace	Recognize the need for management skills in the workplace with regard to stress, anger management and substance abuse.		
J W 11.8.01	Career	Prepare a job application.		
J W 11.8.02	Career	Prepare a personal resume.		
J W 11.8.03	Career	Complete a personal aptitude and interest inventory.		
J W 11.8.04	Career	Participate in a mock job interview.		
J W 11.8.05	Career	Establish short-term career goals.		
J W 11.8.06	Career	Establish long-term career goals.		
J W 11.8.07	Career	Use the Montana Career Information System (CIS) or a similar computer-based program to research careers in a chosen field.		
J W 11.8.08	Career	Participate in an organized job-shadowing activity.		
J W 11.8.09	Career	Participate in a community service project.		
J W 11.8.10	Career	Construct a career portfolio.		
J W 11.9.01	Retention	Maintain an employment/career portfolio.		
J W 11.9.02	Retention	Explain strategies for balancing work and family roles.		
J W 11.9.03	Retention	Demonstrate understanding of the need for lifelong learning in a rapidly changing job market.		
J W 11.9.04	Retention	Describe strategies to maintain employment in the face of job reductions.		
J W 11.9.05	Retention	Develop long-term career planning strategies.		

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J W 11.9.06	Retention	Describe various educational options needed for job retention.		
J W 11.9.07	Retention	Model sound workplace ethics, such as honesty, loyalty, punctuality, and initiative.		
J W 11.9.08	Retention	Demonstrate interpersonal skills needed for job retention.		