

K to 12 TECHNOLOGY AND LIVELIHOOD EDUCATION

**INDUSTRIAL ARTS – MASONRY
(Exploratory)**

Content Standard	Performance Standard	Learning Competencies	Project/ Activities	Assessment	Duration
LESSON 1: PREPARING CONSTRUCTION MATERIALS AND TOOLS					
<p><i>Demonstrate understanding of/on:</i></p> <ul style="list-style-type: none"> • Common types and uses of construction materials • Types of tools • Description of materials and tools • Listing of materials per company standards. 	<ol style="list-style-type: none"> 1. Tools and materials are identified per job requirement. 2. Tools are classified according to function per job requirement. 3. Materials are classified according to uses for a specific construction project. 4. Tools and materials are selected per job requirement. 	<p>LO1. Identify materials and tools applicable to a specific construction job.</p>	<ol style="list-style-type: none"> 1. Listing and describing the tools and materials in masonry. 	<ul style="list-style-type: none"> • Written test • Performance test 	<p>4 hours</p>
<ul style="list-style-type: none"> • Job order slip • Tools and materials requisition slip • Borrower’s Slip • Requisition procedures 	<ol style="list-style-type: none"> 1. Needed materials and tools are listed per job requirement. 2. Materials and tools are requested according to the list prepared. 3. Requests are done per company’s Standard Operating Procedures (SOP). 4. Materials and tools are replaced appropriately at the expense of work quality and cost. 	<p>LO2. Request appropriate materials and tools.</p>	<ol style="list-style-type: none"> 1. Filling up the different forms needed for a specific job 	<ul style="list-style-type: none"> • Written test • Performance test 	<p>3 hours</p>

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<ul style="list-style-type: none"> • Procedures in receiving tools and materials • Proper inspection of tools and materials received. • Proper handling of tools and materials. 	<ol style="list-style-type: none"> 1. Received and inspected materials and tools as per quantity and specification based on requisition. 2. Materials and tools received are handled with appropriate safety devices. 3. Materials and tools are stored in appropriate location nearest the workplace. 	LO3. Receive and inspect materials	<ol style="list-style-type: none"> 1. Demonstrating the proper handling of masonry materials and tools. 	<ul style="list-style-type: none"> • Written test • Performance test 	3 hours

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LESSON 2: PRACTICING HOUSEKEEPING PROCEDURES					
<p><i>Demonstrate understanding of/on:</i></p> <ul style="list-style-type: none"> • Principles of 5S • Safety signs and symbols • Environmental requirements relative to work safety • Accident/Hazard reporting procedures 	<ol style="list-style-type: none"> 1. The basic procedures of 5S are demonstrated in the workplace. 2. Removing and disposing of unnecessary items according to company or office procedures are followed. 3. Reusable and recyclable materials are sorted according to company/ office procedures. 	<p>LO1. Maintain work areas, tools and equipment</p>	<ol style="list-style-type: none"> 1. Writing your reaction on a well-kept workplace. 	<ul style="list-style-type: none"> • Written test • Performance Test 	<p>4 hours</p>
<ul style="list-style-type: none"> • Work processes and procedures • General OHS principles and legislation • Accident/Hazard reporting procedures 	<ol style="list-style-type: none"> 1. Commonly used materials are maintained in designated area according to procedure. 2. Work is performed according to the standard work procedures per instructions and Occupational Health and Safety (OHS) requirements. 3. Incidents are reported to immediate supervisor. 	<p>LO2. Follow standard work processes and procedures</p>		<ul style="list-style-type: none"> • Written test • Performance test 	<p>3 hours</p>

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LESSON 3: OBSERVING PROCEDURES, SPECIFICATIONS, AND MANUALS OF INSTRUCTIONS					
<p><i>Demonstrate understanding of/on:</i></p> <ul style="list-style-type: none"> Types of manuals used in construction sector Different types of symbols Accessing information and data 	<ol style="list-style-type: none"> Manuals are identified and accessed per job requirements. Version and date of manual are checked to ensure that correct specifications and procedures are identified. Relevant sections, chapters, and specifications in the manuals are located in relation to the work to be conducted. Information and procedure in the manual are interpreted in accordance with industry practices. 	<p>LO1. Identify access, and interpret specification materials.</p>	<ol style="list-style-type: none"> Writing down the advantages of the information in the manual. 	<ul style="list-style-type: none"> Performance test Written test 	<p>2 hours</p>
<ul style="list-style-type: none"> Manual/specification application 	<ol style="list-style-type: none"> Work steps are correctly identified in accordance with the manufacturer's specifications. Manual data are applied according to the given task. 	<p>LO2. Apply information from the manual.</p>	<ol style="list-style-type: none"> Performing some specifications in the manual. 	<ul style="list-style-type: none"> Performance test Written test 	<p>2 hours</p>

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<ul style="list-style-type: none"> Manual Handling 	<ol style="list-style-type: none"> Manual or specification is stored appropriately to prevent damage, ready access and updating of information when required in accordance with company requirements. 	LO3. Store the manuals.	<ol style="list-style-type: none"> Performing the proper storing of tools and equipment in masonry. 	<ul style="list-style-type: none"> Performance test Written test 	2 hours

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LESSON 4: PERFORM MENSURATIONS AND CALCULATIONS					
<p><i>Demonstrate understanding of/on:</i></p> <ul style="list-style-type: none"> • Mensuration • Kinds of measurement • Conversion 	<ol style="list-style-type: none"> 1. Calculation needed to complete tasks is done. 2. Accurate measurements are obtained according to job requirements. 3. Systems of measurement are identified and converted according to job requirements. 4. Work pieces are measured according to job requirements. 	<p>LO1. Carry out measurement and calculations.</p>	<ol style="list-style-type: none"> 1. Performing the four fundamental operations. 	<ul style="list-style-type: none"> • Written test • Performance test 	<p>6 hours</p>
<ul style="list-style-type: none"> • Objects and shapes specifically geometric shapes. • Measuring Instruments/Measuring Tools • Proper handling of measuring instruments 	<ol style="list-style-type: none"> 1. Measuring tools are selected/identified per object to be measured or required in the job 2. Correct specifications are obtained from relevant sources. 3. Alternative measuring tools are used without sacrificing cost and quality of work. 	<p>LO2. Select measuring instruments.</p>	<ol style="list-style-type: none"> 1. Demonstrating the proper handling of measuring tools. 	<ul style="list-style-type: none"> • Written test • Performance test 	<p>4 hours</p>

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LESSON 5: MAINTAIN TOOLS AND EQUIPMENT					
<p><i>Demonstrate understanding of/on:</i></p> <ul style="list-style-type: none"> Types of Tools and Equipment. Classification of functional and non-functional tools Uses of Personal Protective Equipment (PPE). 	<ol style="list-style-type: none"> Tools and equipment are identified according to classification/specification, and job requirements. Functional and non-functional tools and equipment are segregated and labeled according to classification. Safety of tools and equipment are observed in accordance with manufacturer's instructions Conditions of PPE are checked in accordance with manufacturer's instructions. 	<p>LO1. Check conditions of tools and equipment</p>	<ol style="list-style-type: none"> Demonstrating the proper maintenance of masonry tools. 	<ul style="list-style-type: none"> Written test Performance test 	<p>4 hours</p>
<ul style="list-style-type: none"> Types and uses of lubricants Types and uses of cleaning materials/solvent Preventive maintenance techniques and procedures. OSHC workplace regulations 	<ol style="list-style-type: none"> Lubricants are identified according to types of equipment. Tools and equipment are lubricated according to preventive maintenance schedule or manufacturer's specifications. Defective equipment and tools are inspected and replaced according to manufacturer's 	<p>LO2. Perform basic preventive maintenance</p>	<ol style="list-style-type: none"> Demonstrating the proper application of lubricant. 	<ul style="list-style-type: none"> Written test Performance test 	<p>6 hours</p>

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	specifications. 4. Work place is cleaned and kept in safe state in line with OSHC regulations.				
<ul style="list-style-type: none"> • Inventory of tools and equipment • Tool safe-keeping/storage 	<ol style="list-style-type: none"> 1. Inventory of tools, instruments, and equipment are conducted and recorded per company practices. 2. Tools and equipment are stored safely in accordance with manufacturer's specifications or company procedures. 	LO3. Store tools and equipment	<ol style="list-style-type: none"> 1. Performing the appropriate steps in storing tools 	<ul style="list-style-type: none"> • Performance test • Written test 	2 hours
					40 hours