



Republic of the Philippines
DEPARTMENT OF EDUCATION



K to 12 BASIC EDUCATION CURRICULUM

TECHNOLOGY AND LIVELIHOOD EDUCATION

CURRICULUM GUIDE

Exploratory Course on

MASONRY

K to 12 TECHNOLOGY AND LIVELIHOOD EDUCATION

**INDUSTRIAL ARTS – MASONRY
(Exploratory)**

Curriculum Guide for the Exploratory Course on Masonry

For you to get a complete picture of the complete TLE exploratory course on Masonry, you are hereby provided with the Curriculum Guide on Masonry.

| Content Standard | Performance Standard | Learning Competencies | Project/ Activities | Assessment | Duration |
|---|--|--|---|--|----------|
| LESSON 1: PREPARE CONSTRUCTION MATERIALS AND TOOLS | | | | | |
| <p><i>Demonstrate understanding of/on:</i></p> <ul style="list-style-type: none"> • Masonry and materials <ul style="list-style-type: none"> - Stone types and varieties of bond pattern - Brick laying and pattern - blocks • masonry tools <ul style="list-style-type: none"> - Surface Finishing Tools | <ol style="list-style-type: none"> 1. Materials and tools are received and inspected as per quantity and specification based on requisition. 2. Tools and materials are checked for damages and manufacturing defects. 3. Materials and tools received are handled with appropriate safety devices. 4. Materials and tools are set aside for appropriate location nearest the workplace. | LO1. Identify materials and tools applicable to a specific construction job. | <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 | 4 hours |
| <ul style="list-style-type: none"> • Job order and requisition slips <ul style="list-style-type: none"> - Sample job order and requisition forms - Borrower's Slip | <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 | LO2. Request appropriate materials and tools. | <ol style="list-style-type: none"> 1. make own and filled-up job order, requisition slip and borrower slip | <ul style="list-style-type: none"> • Written test • Performance test | 3 hours |

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| - Requisition procedures | Standard Operating Procedures (SOP). 4. Materials and tools are replaced appropriately at the expense of work quality and cost. | | 2. Accomplishing different forms from the different factories, companies you visited | | |
| <ul style="list-style-type: none"> Material management Procedures in receiving tools and materials Quality inspection and procedure Materials handling | <ol style="list-style-type: none"> Materials and tools are received and inspected as per quantity and specification based on requisition. Tools and materials are checked for damages and manufacturing defects. Materials and tools received are handled with appropriate safety devices. Materials and tools are set aside in appropriate location nearest to the workplace. | LO3. Receive and inspect materials | <ol style="list-style-type: none"> Draw diagram of the procedures of receiving and inspecting of materials and tools Demonstrating the proper handling of masonry materials and tools | <ul style="list-style-type: none"> Written test Performance test | 3 hours |
| LESSON 2: PRACTICE HOUSEKEEPING PROCEDURES | | | | | |
| <p><i>Demonstrate understanding of/on:</i></p> <ul style="list-style-type: none"> The Working Station What is 5S Signs, signal and barricade Accident prevention signs and tags\ | <ol style="list-style-type: none"> The basic procedures of 5S are demonstrated in the workplace. Removing and disposing of unnecessary items according to company or office procedures are followed. Reusable and recyclable materials are sorted according to company/ office procedures. | LO1. Maintain cleanliness in work areas, tools and equipment and practice occupational | <ol style="list-style-type: none"> Explain the components of 5's Make own shop norms based on 5's Participate on Role Playing | <ul style="list-style-type: none"> Written test Performance Test | 4 hours |

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| <ul style="list-style-type: none"> • Signaling • Work safety • First Aid and Emergency Cases | <p>4. Items are arranged in accordance with company/office housekeeping procedures.</p> | <p>Safety</p> | | | |
| <ul style="list-style-type: none"> • Work simplification • Doable for work simplification • Occupational health and safety • What are the common hazards <ul style="list-style-type: none"> - kick-back, push-back or pull-in - Obstruction or resistance in the material being cut - Crooked or off-line cuts - Pinched cuts - General OHS principles and legislation - Accident/Hazard reporting procedures - blunt cutting edges - unsafe grip, stance or stop-start procedures for hand-held saws | <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> | <ol style="list-style-type: none"> 1. Perform the following: <ul style="list-style-type: none"> • role play: work simplification with audience judge • role play : panel discussion on occupational health and safety. | <ul style="list-style-type: none"> • Written test • Performance test | <p>3 hours</p> |

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| <ul style="list-style-type: none"> - worn, misshapen, cracked or damaged saw blades, or wrong type - risk management - safety procedure | | | | | |
| LESSON 3: OBSERVE 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 signs and symbols • Accessing information and data | <ol style="list-style-type: none"> 1. Manuals are identified and accessed per job requirements. 2. Version and date of manual are checked to ensure that correct specifications and procedures are identified. 3. Relevant sections, chapters, and specifications in the manuals are located in relation to the work to be conducted. 4. Information and procedure in the manual are interpreted in accordance with industry practices. | <p>LO1. Identify access, and interpret materials specification.</p> | <ol style="list-style-type: none"> 1. List down the different types of manual. 2. assignment: gather different manuals (photocopy) | <ul style="list-style-type: none"> • Performance test • Written test | 2 hours |
| <ul style="list-style-type: none"> • Manual/specification application <ul style="list-style-type: none"> - what's in the box - getting started - connections or | <ol style="list-style-type: none"> 1. Work steps are correctly identified in accordance with the manufacturer's specifications. 2. Manual data are applied according to the given task. | <p>LO2. Apply information from the manual.</p> | <ol style="list-style-type: none"> 1. Performing some specification in the manual 2. assignment: conduct interview with shop | <ul style="list-style-type: none"> - Performance test - Written test | 2 hours |

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| installing - set up - specification - parts list - warranty | . | | teacher or workers | | |
| <ul style="list-style-type: none"> Storing the Manuals | 3. 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 formulate shop rules | <ul style="list-style-type: none"> Performance test Written test | 2 hours |
| LESSON 4: PERFORM MENSURATIONS AND CALCULATIONS | | | | | |
| <i>Demonstrate understanding of/on:</i> <ul style="list-style-type: none"> Mensuration Kinds of measurement Measuring Instrument/Measuring Tools Conversion | <ol style="list-style-type: none"> Calculation needed to complete tasks is done. Accurate measurements are obtained according to job requirements. Systems of measurement are identified and converted according to job requirements. Work pieces are measured according to job requirements. | LO1. Carry out measurement and calculations. | <ol style="list-style-type: none"> Performing the four fundamental operations. by solving the given problems assignment: perform unit conversion of measurements | <ul style="list-style-type: none"> Written test Performance test | 6 hours |
| <ul style="list-style-type: none"> Visualizing Objects and shapes specifically geometric shapes. | <ol style="list-style-type: none"> Measuring tools are selected/identified per object to be measured or required in the job Correct specifications are obtained | LO2. Select measuring instruments. | <ol style="list-style-type: none"> finding geometric shapes in a given pictures. drawing of geometric | <ul style="list-style-type: none"> Written test Performance test | 4 hours |

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| <ul style="list-style-type: none"> Selecting Measuring Instruments/Measuring Tools Proper handling of measuring instruments | from relevant sources. 3. Alternative measuring tools are used without sacrificing cost and quality of work. | | figures 3. make a stake-out lines. | | |
| LESSON 5: MAINTAIN TOOLS AND EQUIPMENT | | | | | |
| <i>Demonstrate understanding of/on:</i> <ul style="list-style-type: none"> Types of Tools and Equipment. Classification of functional and non-functional tools risk reduction Uses of Personal Protective Equipment (PPE). | 1. Tools and equipment are identified according to classification/specification, and job requirements. 2. Functional and non-functional tools and equipment are segregated and labeled according to classification. 3. Safety of tools and equipment are observed in accordance with manufacturer’s instructions 4. Conditions of PPE are checked in accordance with manufacturer’s instructions. | LO1. Check conditions of tools and equipment | 1. identification of tools from pictures 2. explain the difference between of functional from non- tools 3. segregate function from non-functional tools in the tool cabinet 4. perform the wordmaze 5. assignment: identify hazard in the work shop 6. assignment: | <ul style="list-style-type: none"> Written test Performance test | 4 hours |
| <ul style="list-style-type: none"> basic lubrication Types of lubricants Kinds, uses and | 1. Lubricants are identified according to types of equipment. 2. Tools and equipment are lubricated | LO2.Perform basic preventive maintenance | 1. describe and explain the use of lubricant 2. perform lubrication | <ul style="list-style-type: none"> Written test Performance test | 6 hours |

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| properties of cleaning materials/solvent <ul style="list-style-type: none"> Preventive maintenance <ul style="list-style-type: none"> routine service for handheld maintain and service motorized product | according to preventive maintenance schedule or manufacturer’s specifications. <ol style="list-style-type: none"> Defective equipment and tools are inspected and replaced according to manufacturer’s specifications. Work place is cleaned and kept in safe state in line with OSHC regulations. | | on shop tools and equipment. | | |
| <ul style="list-style-type: none"> Store Tools and Equipment <ul style="list-style-type: none"> Tools and equipment inventory Reason for maintaining Tools and Equipment | <ol style="list-style-type: none"> Inventory of tools, instruments, and equipment are conducted and recorded per company practices. 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"> Conduct tool inventory Performing the appropriate steps in storing tools | <ul style="list-style-type: none"> Performance test Written test | 2 hours |
| | | | | | 40 hours |

“By three methods we may learn wisdom: First, by reflection, which is noblest; second, by imitation, which is easiest; and third by experience, which is the bitterest.”

- Confucius