

INDUSTRIAL TECHNOLOGY

ELECTRICAL TECHNOLOGY LEVEL 7

Topic	Skills	Knowledge	Understanding	Attitude	Content	Methods/ Strategies	Evaluation	Area of Integration
General Health and Safety Requirement and Procedures	<p>Practicing personal and general safety requirements governing workshops and work sites.</p> <p>Practicing electrical and electronic safety requirements governing workshops.</p> <p>Follow safety procedures based on rules and regulations.</p>	<p>Identify personal and general safety in workshop.</p> <p>Electrical and electronic safety regulations pertaining to safety in workshop.</p> <p>The safety procedures based on rules and regulations in workshop.</p>	<p>Safety is important in workshop and worksites.</p> <p>Regulations and rules governing workshops are prepared and must be adhered to.</p> <p>Electrical and electronic safety requirements are important and must be followed at all times.</p>	<p>Always be prepared to work in a workshop with safety in mind.</p> <p>Beware of accident hazards and the safe use of machines, tools and equipment.</p> <p>Careless use of equipment can cause serious accident to one self and others.</p>	<p>Requirements as prescribed through rules and regulations for the country in relation to workshops.</p> <p>List of rules, regulations, procedures for specific rules and regulations in booklets, charts, diagrams and videotapes.</p>	<p>Outline rules and regulations governing workshops safety.</p> <p>Discuss the importance of safety and the need for it at all times.</p> <p>Let students list safety rules and identify areas of accident hazards.</p>	<p>Observe the students as they prepare to enter the workshop.</p> <p>Prepare them with the correct outfit.</p> <p>Observe the regulations and rules in handling tools, materials and equipment.</p> <p>Let students do simple projects using tools.</p>	<p>Agriculture Science</p> <p>Home Economics</p> <p>Physics.</p>

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Maintain Safety and Healthy Working Environment.	<p>Be familiar with the environment hazards and safe disposal of water.</p> <p>Practice good hygiene in workstation.</p> <p>Plan and organize efficient use and maintenance of workstations.</p> <p>Correct practices at work places safety and hazards.</p>	<p>State/list</p> <p>Be aware of the environment, waste disposal hygiene procedure.</p> <p>The plan for maintaining healthy working environment.</p> <p>The correct principles and practices at work places.</p> <p>Be aware of hazards.</p>	<p>The layout and surrounds of the work place.</p> <p>The method of waste disposal, hazards, cleaning storing, acceptable behaviour, rules and record keeping.</p> <p>Carelessness and negative attitude leads to accidents and injury.</p>	<p>Always be aware of the working environments, cleaning schedules, waste disposals, storage of tools and materials.</p> <p>Show leadership qualities in the work place.</p> <p>Organise cleaning and storing activities.</p> <p>Allocate time for cleaning after work.</p>	<p>Types of work environment, hazards, disposal hygiene practices and requirements.</p> <p>Knowledge of the environment and the hazards.</p> <p>Inventory of resources.</p> <p>Preparation schedules and procedure.</p> <p>Storage of materials and supplies, maintenance of tools, equipment, machines, rules, regulations and specifications.</p>	<p>Prepare charts of rules and regulations.</p> <p>Prepare schedules for cleaning inventory, stock of materials.</p> <p>Method of removing waste materials.</p> <p>Check tools before and after use.</p> <p>Identify hazards due to carelessness.</p> <p>Prepare reports on a monthly basis.</p>	<p>Ask students to identify and define the environment, hazards, waste disposals, workstations and hygiene.</p> <p>Let students organise cleaning and storage of tools, materials and equipment.</p> <p>Maximum use of tools and materials.</p>	<p>Home Economics</p> <p>Art & Craft</p> <p>Science</p> <p>Agriculture Science.</p>

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First Aid	<p>Define the term injury, accident and emergency.</p> <p>Acquire help in the event of an accident.</p> <p>How to take care of an accident victim or injured person.</p> <p>Applying first aid treatment for shock, burns, wounds, fracture, eye injury, choking and poisoning.</p>	<p>What is an injury and an accident.</p> <p>What form of help is required in an accident?</p> <p>How to handle an injured person.</p> <p>What form of first aid to apply to a specific injury?</p> <p>Apply artificial respiration.</p>	<p>Accidents cause serious injuries and emergencies.</p> <p>Injured persons need help quickly.</p> <p>How to handle an injured person.</p> <p>The form of first aid to apply.</p> <p>Procedures for treating shocks, burns, wounds, broken limbs, etc.</p>	<p>Be aware of accident, hazards and avoid them.</p> <p>Assist persons who become injured.</p> <p>Obtain help from eligible persons.</p> <p>Apply first aid treatment to injured person.</p> <p>Practise the step in treating shocks, burns, wounds, broken limbs, poisoning, etc.</p>	<p>Types of accidents injury and emergencies.</p> <p>Requirements and procedures.</p> <p>Contents of a First Aid Kit.</p> <p>Procedures for treating shock, burns, wounds, broken limbs, injury to eye, choking and poisoning.</p> <p>Use of charts, booklets, diagrams and video tapes.</p>	<p>Define the terms associate, with injuries, accidents and emergencies.</p> <p>Explain the type of help needed in the event of an accident.</p> <p>Demonstrate the type of assistance you will offer to an injured person.</p> <p>Explain first aid principles.</p> <p>Treat cases of shock, burns, fractures, poisonings, eye injury, etc.</p>	<p>List types of accidents and injuries sustained.</p> <p>List steps in treating an injured person.</p> <p>Demonstrate first aid treatment and artificial respiration.</p> <p>Treat cases of shock, burns, eye injuries, fractures and poisonings.</p>	<p>Home Economics</p> <p>Agriculture Science</p> <p>Integrated Science</p> <p>Physics</p> <p>Craft.</p>

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Electron Theory	<p>Be able to draw and label a diagram to show the structure of an atom.</p> <p>Define the unit of charge the coulomb.</p> <p>Calculate Q, I at t using the formula $Q=I \times t$.</p>	<p>Draw a diagram to show the structure of an atom and label the parts.</p> <p>Define the unit and state the formula.</p> <p>Know to calculate formula quality of charge, current and time using $Q=It$</p>	<p>The structure of atom.</p> <p>Define matter, element molecules and compound.</p> <p>The symbol and unit of charge, current and time.</p> <p>To calculate the charge Q, the current I and time in a circuit using $Q=I \times t$ $I=Q/t$ $T=Q/I$.</p>	<p>Be aware of the nature of matter – the structure of an atom and the particles of an atom. Draw the symbol, state the unit of Q, I and t.</p> <p>Calculate charge Q, current I and time t using the formula $Q=It$,</p> <p>Students must avoid direct contact with electric charge.</p>	<p>(Knowledge) Matter, elements, molecules compounds and simple electron theory.</p> <p>Structure of an atom, the charge on each particle of an electron.</p> <p>Movements of electrons in an atom.</p> <p>Coulombs per second and ion.</p> <p>Concept of resistance and voltage,</p> <p>Calculation of charge, current and time.</p>	<p>Define matter, elements, molecule and compound.</p> <p>Show the structure of an atom, showing name of the particles and the charge on each particle.</p> <p>Explain the movement of charges and calculate the charge, current and resistance and time taken for charge.</p> <p>Give example and check students' work to avoid direct contact or transfer of electric charge.</p>	<p>Let students draw a diagram to show the structure of an atom, name the particles and state the charge on each particle.</p> <p>Calculate charge, time and current, voltage and resistance of circuit.</p>	<p>Integrated Science</p> <p>Physics</p>

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OHM's Law	<p>i) Being able to state and verify ohms law as a relationship between current, voltage and resistance.</p> <p>ii) Verify Ohm's Law by experiment.</p> <p>iii) Manipulate formulae involving use of OHM's Law.</p> <p>iv) Perform calculations involving voltage, current and resistance.</p>	<p>State Ohms Law and show the relationship between the quantities.</p> <p>Definition of voltage, current and resistance and units.</p> <p>Change the formula to find V, I and R.</p> <p>To calculate V,I & R in a circuit using Ohms Laws.</p>	<p>The relationships between current, voltage and resistance in a simple circuit.</p> <p>To define and state the units of the quantity V,I and R $V=I \times R$ $I=V/R$ $R=v/I$</p> <p>To calculate V,I & R using the formulae from Ohm's Law.</p>	<p>Become familiar with definition of qualities and their units as it applies to Ohm's Law.</p> <p>Be able to change the subject of the formula to calculate V,I and R.</p> <p>Calculate V,I & r using values for voltage, current and resistance in a simple circuit.</p> <p>Develop the ability to make accurate measurements and calculations.</p>	<p>Experiment to verify Ohm's Law.</p> <p>Definition and unit of current, voltage and resistance in a circuit.</p> <p>Formulate establishing relationships between current, voltage and resistance.</p> <p>Application of Ohm's Law.</p> <p>Concept of conventional flow of current and election flow.</p>	<p>Perform experiment with a circuit to find the current, voltage and resistance.</p> <p>Reduce the relationship and write a definition for each quantity and state their symbol and unit name.</p> <p>Manipulate formula and use typical values and calculate V, I and R in circuits.</p>	<p>Define, write symbol and unit name for each quantity.</p> <p>State Ohm's Law and write the formulae for each quantity V,I and R.</p> <p>Calculate voltage, current and resistance in a circuit Ohm's Law:- $V = I \times R$ $I = V / R$ $R = V / I$.</p>	<p>Integrated Science</p> <p>Physics</p>