National Technical and Vocational Qualification Framework



Competency-Based Learning Material

NTVQ Level 1

Applying OSH Practices in the Workplace





Bangladesh Technical Education Board Agargoan, Shere Bangla Nagar Dhaka-1207

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HOW TO USE THIS COMPETENCY-BASED LEARNING MATERIAL

Welcome to the module **Applying OSH Practices in the Workplace**. This module contains training materials and activities for you to complete.

This unit of competency, **"Apply OSH Practices in the Workplace"**, is one of the competencies of any NTVQ Level 1 Occupation, a course which comprises the knowledge, skills and attitudes required to become a basic-skilled Worker.

You are required to go through a series of learning activities in order to complete each learning outcome of the module. These activities may be completed as part of structured classroom activities or you may be required to work at your own pace. These activities will ask you to complete associated learning and practice activities in order to gain knowledge and skills you need to achieve the learning outcomes.

Refer to **Learning Activity Page** to know the sequence of learning tasks to undergo and the appropriate resources to use in each task. This page will serve as your road map towards the achievement of competence.

Read the **Information Sheets**. These will give you an understanding of the work, and why things are done the way they are. Once you have finished reading the Information sheets complete the questions in the Self-Check Sheets.

Self-Checks follow the Information Sheets in the learning guide. Completing the Self-checks will help you know how you are progressing. To know how you fared with the self-checks review the **Answer Key**.

Complete all activities as directed in the **Job Sheets and/or Activity sheets**. This is where you will apply your new knowledge while developing new skills.

When working though this module always be aware of safety requirements. If you have questions, do not hesitate to ask your facilitator for assistance.

When you have completed all the tasks required in this learning guide, an assessment event will be scheduled to evaluate if you have achieved competency in the specified learning outcomes and are ready for the next task.

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MODULE CONTENT

MODULE TITLE: Applying OSH Practices in the Workplace

MODULE DESCRIPTOR:

This module covers the knowledge, skills and attitude in identifying and applying Occupational Health and Safety in the workplace. It includes identifying, controlling and reporting health and safety hazards, conducting work safely, following emergency response procedures, and maintaining and improving safety in the workplace. It also includes information sheets, self-checks, and activity sheets.

NOMINAL DURATION: 30 hours

LEARNING OUTCOMES:

After completing this module, you MUST be able to:

- 1. Identify, control and report OSH hazards
- 2. Conduct work safely
- 3. Follow emergency response procedures
- 4. Maintain and improve health and safety in the workplace

ASSESSMENT CRITERIA

1. Immediate work area is routinely checked for OSH hazards prior to commencing and during work.

2. Hazards and unacceptable performance are identified and corrective action is taken within the level of responsibility.

3. OSH hazards and incidents are reported to appropriate personnel according to workplace procedures.

- 4. Safety signs and symbols are identified and followed.
- 5. Apply OSH practices in the workplace.
- 6. Appropriate personal protective equipment (PPE) is selected and worn.

7. Emergency situations are identified and reported according to workplace reporting requirements.

8. Emergency procedures are followed as appropriate to the nature of the emergency and according to workplace procedures.

9. Workplace procedures for dealing with accidents, fires, and emergencies are followed whenever necessary within scope of responsibilities.

10. Risks are identified and appropriate control measures are implemented in the work area.

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11. Recommendations arising from the risk assessment are implemented within level of responsibility.

12. Opportunities for improving OSH performance are identified and raised with relevant personnel.

13. Maintain safety records according to company policy.

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LEARNING OUTCOME 1

IDENTIFY, CONTROL AND REPORT OSH HAZARDS

CONTENTS:

- 1. Routinely check immediate work area for OSH hazards prior to commencing and during work
- 2. Identify hazards and unacceptable performance and take corrective action within the level of responsibility
- 3. Report OSH hazards and incidents to appropriate personnel according to workplace procedures
- 4. Identify and follow safety signs and symbols

ASSESSMENT CRITERIA

- 1. Immediate work area is routinely checked for OSH hazards prior to commencing and during work.
- 2. Hazards and unacceptable performance are identified and corrective action is taken within the level of responsibility.
- 3. OSH hazards and incidents are reported to appropriate personnel according to workplace procedures.
- 4. Safety signs and symbols are identified and followed.

CONDITIONS:

Trainees must be provided with the following:

• Personal Protective equipment

Learning Materials

- Books, manuals
- Modules/references

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LEARNING ACTIVITIES

LEARNING OUTCOME: Identify, Control and Report OSH Hazards

LEARNING ACTIVITIES	RESOURCE/SPECIAL INSTRUCTIONS
Identifying different types of hazards in the workplace	 Read Information Sheet 2.1-1 Answer Self Check 2.1-1 Compare your answer to the Answer Key 2.1-1 Perform Activity Sheet 2.1-1 Check using Performance Criteria Checklist 2.1-1
Familiarizing on Safety Signs and Symbols	 Read Information Sheet 2.1-2 Answer Self Check 2.1-2 Compare your answer to the Answer Key 2.1-2

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INFORMATION SHEET 2.1-1 Hazards in the Workplace

Learning Objectives:

After reading this INFORMATION SHEET, you will be able to identify different types of occupational health and safety hazards in the workplace.

Hazards in the Workplace

There is no substitute for caution and common sense. A safe job is no accident; it takes work to make the job safe. Each person working must do what it takes to keep the job safe.

Any type of job- whether industrial or manual, has a number of potential safety hazards. These hazards need not result in anyone being injured. Learning to work safely with these hazards is as important as learning to be a skilled worker.

You must approach new jobs with your safety in mind. Your safety is your own responsibility, and you must take that responsibility. Some hazards will create an injury and illness right away. Other hazards may not cause an injury or illness until much later in life. For this reason, workers should take all hazards seriously, even if they do not immediately experience problems.

A hazard is something that has the potential to cause harm.

A risk is the likelihood that the hazard will actually cause harm under prevailing conditions.

Environmental Hazards

- 1. **Physical Hazards**. Hazards due to the transfer of energy between an object and a worker.
 - Excessive Noise
 - Inadequate Illumination
 - Extreme Temperature
 - Extreme Pressure
 - Vibration
 - Radiation
 - Inadequate Ventilation



Figure 1. Cluttered area

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- Cluttered Area
- Ignorance or carelessness
 of the worker
- 2. **Chemical Hazard**. Hazards arise from inhaling chemical agents in the form of vapors, gases, dusts, fumes, mists, or by skin contact with these materials.
 - Mists. Fine particles of a liquid float in air
 - Gases. Substances in gaseous state but are always airborne at room temperature.
 - Vapors. Results when substances that are liquids at room temperature evaporate.



Figure 2. Chemical agents

- Dusts. Solid harmful substances are ground, cut or crushed by mechanical actions.
- Fumes. Gas is condensed in air, chemically changed and becomes fine solid particles which float in air.

Four Possible Routes of Entry of Chemical Hazards

- 1. Inhalation. Breathing in toxics is the most common and dangerous route.
- 2. Ingestion. Toxics enter through the gastrointestinal tract.
- 3. Absorption. Toxics pass through skin into the bloodstream.
- 4. Injection. Toxics may be injected into the body (needles, etc.)- the least common, yet most direct route of entry

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3. **Biological Hazards.** Hazards are caused by living organisms which include insects, molds, fungi, viruses, and bacterial contamination; from defects in sanitation and housekeeping procedures, such as in the provision of potable water, removal of industrial waste and sewage, food handling and personal cleanliness.



Figure 3. Biological Hazards

Agents of Biological Hazards

- 1. Bacteria simple, one-celled organisms that may or may not be harmful.
- 2. Viruses organisms that depend on a host cell for development or reproduction.
- 3. Fungi may be small or large parasitic organisms growing in a living or dead plant animal matter.
- 4. Rickettsia rod-shaped microorganisms that are smaller than bacteria and

depend on a host for development or reproduction. Microorganisms transmitted

by fleas, ticks, and lice

Common Health Problems from Biological Hazards

- a. Tuberculosis (TB)
- b. Tetanus
- c. Viral Hepatitis
- d. HIV/AIDS

Diseases caused by virus

- a. Upper Respiratory Tract Infection
- b. Hepatitis B Infection
- c. Acquired Immunodeficiency Syndrome (AIDS)
- d. Rabies



Figure 4. Virus

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4. **Ergonomic Hazards.** Hazards are commonly seen in the workplaces which are improperly designed tools or work areas, improper lifting or reaching, poor visual conditions or repeated motions in an awkward position that may be responsible for fatigue, stress and strain and may lead to accidents in the occupational environment.

Effects of Ergonomic Hazards

- a. low productivity
- b. high rate of errors
- c. material wastage and equipment

Health Problems caused by Ergonomics

- a. musculoskeletal problems
- b. vascular problems
- c. visual problems
- d. hearing problems
- e. skin problem
- f. psychological problems





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SELF-CHECK 2.1-1

Multiple Choice: Read and analyze the statement carefully. Choose the best answer and write the letter only in your answer sheet.

- 1. Hazards due to transfer of energy between an object and a worker.
 - a. Chemical Hazards
 - b. Physical Hazards
 - c. Biological Hazards
 - d. Ergonomics Hazards
- 2. What classification of hazards when a welder's hand deadened because of unadvisable position during welding?
 - a. Chemical Hazards
 - b. Physical Hazards
 - c. Biological Hazards
 - d. Ergonomics Hazards
- 3. Impact resulting from being struck by and struck against objects may cause serious accidents.
 - a. Chemical Hazards
 - b. Physical Hazards
 - c. Biological Hazards
 - d. Ergonomics Hazards
- 4. Toxics pass through gastrointestinal organ.
 - a. Ingestion
 - b. Inhalation
 - c. Absorption
 - d. injection
- 5. People who work with animals, animal products or animal wastes have a greater risk of infection.
 - a. Chemical Hazards
 - b. Physical Hazards
 - c. Biological Hazards
 - d. Ergonomics Hazards

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ANSWER KEY 2.1-1

- 1. b
- 2. d
- 3. b
- 4. a
- 5. c

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ACTIVITY SHEET 2.1-1				
Activity Title	Identify Hazards in the Workplace			
Purpose	o practice identifying Occupational Health and Safety			
Supplies/Materials	Pen, Paper			
Procedure:	 Ask your trainer for an assigned room in the training center. Visit the room assigned to you and identify all the hazards in the workplace. List down all your observations on a piece of paper and write down the corrective actions to be taken. Submit your work to your trainer. 			
Assessment Method:	Performance Criteria Checklist			

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PERFORMANCE CRITERIA CHECKLIST 2.1-1

Criteria		
Did I	YES	NO
 Check for OSH hazards in the workplace prior to commencing and during work? 		
2. Identify hazards and unacceptable performance in the workplace?		

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INFORMATION SHEET 2.1-2 Safety Signs and Symbols

Learning Objectives:

After reading this INFORMATION SHEET, you will be able to identify and follow safety signs and symbols in the workplace.

Safety Signs and Symbols

Safety symbols are pictures sometimes called safety pictographs, pictograms, or pictorials. They are used in place of, or as a supplement to written words. These symbols provide warnings or alerts about a possible hazard.

Because pictures may convey information better than words, graphic symbols are added to precautionary labels to show major workplace dangers like welding or cutting hazards.

The use of symbols on precautionary labels is optional, and is recommended for the following reasons:

- Symbols may show and help to explain the hazards quickly.
- Symbols can be understood by both readers and non-readers.
- Symbols may be multilingual and usually translate directly into all languages.

The industry has adopted standardized symbols and uniform methods of use to avoid user confusion and to supplement and reinforce the written message.

Words

The large word at the top of the label is called the signal word. It is used in combination with a specific colored background and combined with the safety alert symbol to indicate the degree of seriousness of a potential hazard. Because of its colored background, the signal word is usually the first element that you notice when looking at a safety label. There are three (3) choices for a signal word:

1. **DANGER.** Use to indicate an imminently hazardous situation which, if avoided, will result in death or serious injury. The use of this signal word should be limited to the most extreme situations.

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Figure 6. Danger Signal



2. **WARNING.** This indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

Figure 7. Warning Signal

Figure 8. Caution Signal



3. **CAUTION.** Use to indicate a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. CAUTION may also be used without the safety color symbol (the triangle with exclamation mark) to indicate property-damage-only.

CAUTION NO WELDING ALLOWED

Color

Since color is typically the first thing that draws the attention of the viewer, the color-coded surround shapes act as a first level of meaning and, as you draw closer to the sign, you are able to distinguish the specific information conveyed by the graphic symbol.

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Classification of Safety Signs

1. Regulatory Signs

Signs contain instructions. Failure to comply with them constitutes an offense under law, standing orders, company policy, etc.

A. **Mandatory signs** are regulatory signs which indicate that an instruction must be carried out. When symbols are used they are white on a blue disc. Text-only mandatory signs are black on white in a portrait format.

NOTICE		NOTICE	NOTICE
This is a Hard Hat Area Selety microsts Musi So Warn		Hearing & Eye Protection Report of the area	Face Shield Must be wore in this area
NOTICE	NOTICE	NOTICE	NOTICE
Safety Harness Must be worn	Ereathing Apparatus Must lo worm	Dust Mask Must he worm in this area	Rand Protection Must be worm in this area

Figure 9. Examples of Mandatory Signs

B. **Prohibition signs** are regulatory signs which indicate that an action or activity is not allowed. The symbolic shape used on prohibition signs is the red circle and slash over a black symbol. Prohibition signs may contain only the red circle and text with no symbol.



Figure10. Examples of Prohibition Signs

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2. Warning Signs

Signs which warn of a hazard or hazardous condition that is not likely to be life-threatening. The symbolic shape used on warning signs is black triangle with yellow interior and black symbol. The word warning is not required to print on the sign, although it is often used for added impact.







Figure 11. Examples of Warning Signs

3. Danger Signs

Signs which warn of a hazard or hazardous condition that is likely to be life-threatening. It is recommended that symbols not be used on danger signs.

Figure 12. Example of Danger Sign



4. Fire Signs

Advise the location of fire alarms and fire fighting equipment. Fire signs contain a white symbol and/or text on a red background.

Figure 13. Examples of Fire Signs



5. Emergency Information Signs

Indicate the location of, or direction to, emergency related facilities (exits, first aid, safety equipment, etc.). These signs feature a white symbol and/or text on a green background.

Figure 14. Examples of Emergency Information Signs



6. General Information Signs

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Communicate information of a general nature in order to avoid misunderstanding or confusion. These signs often refer to housekeeping, company practices and logistics.



Figure 15. Examples of General Information Signs

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SELF-CHECK 2.1-2

Multiple Choice: Read and analyze the statement carefully. Choose the best answer and write the letter only in your answer sheet.

- 1. Pictures used to informed workers on safety practices.
 - a. Cautions
 - b. Warnings
 - c. Prohibitions
 - d. Safety signs
- 2. Usually the first element that you notice when looking at a safety level.
 - a. Words
 - b. Color
 - c. Background
 - d. Signal words
- 3. Use to indicate a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
 - a. Danger
 - b. Caution
 - c. Warning
 - d. Emergency
- 4. Prohibition signs used a symbolic shape.
 - a. red circle
 - b. text with symbol
 - c. indicate that an action is not allowed
 - d. red circle with slash over a black symbol
- 5. Signs indicate that an instruction must be carried out.
 - a. regulatory signs
 - b. mandatory signs
 - c. prohibition signs
 - d. warning signs

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ANSWER KEY 2.1-2

- 1. d
- 2. d
- 3. b
- 4. d
- 5. b

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LEARNING OUTCOME 2 CONDUCT WORK SAFELY

CONTENTS:

- 1. Apply OSH practices in the workplace
- 2. Select and wear appropriate personal protective equipment (PPE)

ASSESSMENT CRITERIA

- 1. OSH Practices are applied in the workplace.
- 2. Appropriate personal protective equipment (PPE) is selected and worn.

CONDITIONS:

Trainees must be provided with the following:

• Personal Protective equipment

Learning Materials

- Books, manuals
- Modules/references

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LEARNING ACTIVITIES

LEARNING OUTCOME: Conduct Work Safely

LEARNING ACTIVITIES	RESOURCE/SPECIAL INSTRUCTIONS
Identifying Safety Standards in the Workplace	 Read Information Sheet 2.2-1 Answer Self Check 2.2-1 Compare your answer to the Answer Key 2.2-1
Familiarizing on Personal Protective Equipment	 Read Information Sheet 2.2-2 Answer Self Check 2.2-2 Compare your answer to the Answer Key 2.2-2

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INFORMATION SHEET 2.2-1 Safety Standards in the Workplace

Learning Objectives:

After reading this INFORMATION SHEET, you will be able to identify and practice safety standards in the workplace.

Occupational Safety and Health Standards

Occupational Safety and Health Standards (OSHS) are mandatory rules and standards set and enforced to eliminate or reduce occupational safety and health hazards in the workplace.

OSH Standards aim to provide at least the minimum acceptable degree of protection that must be granted to every worker in relation to dangers of injury, sickness or death that may arise by reason of his or occupation. The provision of OSHS by the government is an exercise of police powers, with the intention of promoting the welfare and well-being of workers.

Coverage and Scope of OSHS

All establishments, workplaces and other undertakings are covered, including agricultural enterprises whether operating for profit or not, except:

- 1. Residential places exclusively devoted to dwelling purposes.
- 2. Those directly engaged in land, sea and air transportation (however, their dry dockers, garages, hangers and maintenance, and repair shops and offices are covered).
- 3. The activities of a lessee regarding the safety of a mining claim or lease, including mines safety, mineral conservation and pollution in establishments or work places falling under the mining industry.

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Minimum Standards on Safety and Health in the Workplace

The OSHS require every company to keep and maintain its workplace free from work hazards that are likely to cause physical harm to the workers or damage to property.

The following must be provided by the employer:

- Appropriate seats, lighting and ventilation.
- Adequate passageways, exits and fire fighting equipment
- Separate toilet facilities and lockers for men and women.
- Appropriate safety clothing like protective gear, masks, helmets, safety boots, coats or goggles.
- Medicines, medical supplies or first-aid kits.
- Free medical and dental services and facilities.

Safety Measures to be Observed within the Premises of Establishments

- Building premises shall have adequate fire, emergency or danger signs and safety instructions of standard colors and sizes visible at all times.
- Other visible signs that may be needed to direct the drivers of motorized vehicle such as STOP, YIELD, and DO NOT ENTER, properly positioned within the compound of the establishment to increase safety especially during the night.
- Handicapped employees shall be restricted only to designated workplaces. As far as practicable and feasible, they shall be provided with facilities for safe and convenient movement within the establishment.
- Good housekeeping shall be maintained at all times through cleanliness of buildings, yards, machines, equipments, regular waste disposal, and the orderly arrangement of process operations, storage and filing materials.
- Adequate dressing rooms, lockers rooms, comfort rooms and lavatories separate for male and female workers shall be provided

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Responsibilities of Employers and Employees under OSHS

Duties of Employers

- Adopt administrative policies on safety in accordance with the provisions of the standards.
- Report to the Regional Director or his/her duly authorized representative the policies adopted and the safety organization established.
- Submit a report to the Regional Director or his/her duly authorized representative once every three months on the safety performance, safety committee meetings and its recommendations and measures taken to implement the recommendation.
- Act on recommended safety measures and provide access to appropriate authorities.

Duties of Employees

- Follow safety policies
- Report unsafe conditions and practices to the supervisor
- Serve as member of the Health and Safety Committee, when called upon to do so.
- Cooperate with the Health and Safety Committee
- Assist government agencies in the conduct of safety and health inspection

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SELF-CHECK 2.2-1

- 1. Enumerate five (5) minimum standards of Health and Safety in the workplace.
- 2. Enumerate five (5) Safety Measures to be observed within the premises of establishments.
- 3. Enumerate three (3) Duties of Employers under OSHS.
- 4. Enumerate three (3) Duties of Employees under OSHS.

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ANSWER KEY 2.2-1

- 1. Enumerate five (5) minimum standards of Health and Safety in the workplace.
 - a. Appropriate seats, lighting and ventilation
 - b. Adequate passageways, exits and fire fighting equipment
 - c. Separate toilet facilities and lockers for men and women
 - d. Appropriate safety clothing like protective gear, masks, helmets, safety boots, coats or goggles
 - e. Medicines, medical supplies or first-aid kits
 - f. Free medical and dental services and facilities
- 2. Enumerate five (5) Safety Measures to be observed within the premises of establishments.
 - a. Building premises shall have adequate fire, emergency or danger signs and safety instructions of standard colors and sizes visible at all times.
 - b. Other visible signs that may be needed to direct the drivers of motorized vehicle such as STOP, YIELD, and DO NOT ENTER, properly positioned within the compound of the establishment
 - c. Handicapped employees shall be restricted only to designated workplaces.
 - d. Good housekeeping shall be maintained at all times
 - e. Adequate dressing rooms, lockers rooms, comfort rooms and lavatories separate for male and female workers shall be provided
- 3. Enumerate three (3) Duties of Employers under OSHS.
 - a. Adopt administrative policies on safety in accordance with the provisions of the standards.
 - b. Report to the Regional Director or his/her duly authorized representative the policies adopted and the safety organization established.
 - c. Submit a report to the Regional Director or his/her duly authorized representative once every three months on the safety performance, safety committee meetings and its recommendations and measures taken to implement the recommendation.
 - d. Act on recommended safety measures and provide access to appropriate authorities.
- 4. Enumerate three (3) Duties of Employees under OSHS.
 - a. Follow safety policies
 - b. Report unsafe conditions and practices to the supervisor
 - c. Serve as member of the Health and Safety Committee, when called upon to do so.
 - d. Cooperate with the Health and Safety Committee
 - e. Assist government agencies in the conduct of safety and health inspection

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INFORMATION SHEET 2.2-2

Personal Protective Equipment

Learning Objectives:

After reading this INFORMATION SHEET, you will be able to define Personal Protective Equipment (PPE).

Personal Protective Equipment

PPE or Personal Protective Equipment is any clothing, equipment or substance designed to protect a person from risks of injury or illness.

PPE may include:

- Ear muffs and ear plugs
- Respirators
- Eye and face protection such as goggles
- Safety helmets and sun hats
- Gloves and safety boots
- Clothing, such as aprons, uniforms, vests, life jackets



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Ear Protection

• **Earmuffs** are used to protect the ears from too much noise in the workplace. The designed is to fully cover the ears.



• **Earplugs** are used to protect the ears from too much noise in the workplace. The designed is to fully cover the ears.

Figure 18. Earplugs

Eye and Face Protection

• **Face shield** is best for general protection of the face. Commonly worn under a welding helmet.



Figure 18. Face Shield



• **Safety Goggles** are used to protect the eyes from dust and particles.

Figure 19. Safety goggles

Lung Protection

• **Respirators** filter dust and other particles from the air.

Figure 20. Respirators



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Figure 17. Earmuffs

Hand Protection

• Gloves are the most common type of PPE used. It can protect the hands from heat, spatter, dirt or radiations.

Figure 21. Gloves



Foot Protection

• **Safety shoes** are made of leather designed purposively to protect the toe from falling objects.

Figure 22. Safety Shoes

Body Protection

• Leather apron is made of chrome leather and provides a welder with complete protection from sparks and hot metal from his chest to mid calf.

Figure 23. Leather Apron



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Proper Use of Personal Protective Equipment

The primary approach in any safety effort is to maintain or change the physical environment so that accidents cannot occur. However, it is necessary for economic reasons or in temporary or changing conditions to safeguard personnel by equipping them individually with specialized personal protective equipment (PPE). Although the use of PPE is an important consideration in the development of a safety and health program, it should not be used permanently instead of engineering out or otherwise maintaining a safe and healthy work environment. In general, government regulations list the use of PPE as a case of last resort. Analyze accident situations to determine whether PPE can prevent a recurrence. When work conditions cannot be made safer, clearly PPE is necessary.

Proper Training

To obtain the worker's complete compliance with the requirements to wear the PPE, the following factors must be considered:

- 1. the extent to which the personnel who must wear the equipment understand its necessity
- 2. the ease and comfort with which it can be worn with a minimum of interference with normal procedures
- 3. the available economic, social, and disciplinary sanctions which can be used to influence the attitudes of the workers

Head Protection

Safety hats should be inspected prior to each use.

- Inspect suspension systems that show evidence of materials cracking, tearing, fraying or other signs of deterioration.
- Check any signs of cracks of perforations of brim or shell, deformation of shell, or evidence or exposure to excessive heat, chemicals or radiation.



Figure 24. Helmet

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3. Remove any accumulation of conductive material on or inside the shell that cannot be removed prior to use.

Objects should not be placed inside the safety hat between the shell and the suspension device. This space is designed so an impact will not transmit to the head of the worker.

Safety hats should be kept free of abrasions, scrapes and nicks and should not be deliberately dropped, thrown or otherwise abuse d because they will lose their protective qualities.

Ventilation should not be drilled in safety hats.

Eye and Face Protection

Eye protectors must meet the minimum requirements:

- Provide adequate protection against the particular hazards for which they are designed
- 2. Be reasonably comfortable when worn under the designated conditions
- 3. Fit snugly without interfering with the movements or vision of the wearer
- 4. Be durable
- 5. Be capable of being disinfected
- 6. Be easily cleanable
- 7. Be kept clean and in good repair



Figure 25. Goggles

8. The fitting of goggles and safety spectacles should be performed by someone skilled in the procedure. Prescription safety spectacles should be fitted only by a qualified optical person. Safety spectacles require special frames. Combinations of normal street wear frames with safety lenses are not in compliance

Ear Protection

The prevention of excessive noise exposure is the only way to avoid hearing damage. Engineering and administrative control must be used if the sound levels are

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exceeded. If such controls fail to reduce the sound levels within the level specified, personal hearing protection must be used. Molded earplugs should be individually fitted by a professional.

Some earplugs are disposable, to be used one time and then thrown away. The nondisposable type should be cleaned after each use for proper protection.

Earmuffs must make a perfect seal around the ear to be effective. Glasses, long sideburns, long hair and facial movements, such as chewing can be reducing protection. Special equipment

is available for use with glasses or beards.



Figure 26. Earmuffs & Earplugs

Foot and Leg Protection

Protection of feet and legs from falling or rolling objects, sharp objects, molten metal, hot surfaces, and wet slippery surfaces, workers should use appropriate foot guards, safety shoes, boots and leggings.

Never wear open-toed while working with hot metal or welding apparatus.

Figure 27. Safety shoes and Leggings



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SELF-CHECK 2.2-2

1. What is PPE?

- 2. Give examples for each type of PPE.
 - a. Ear Protection
 - b. Eyes and Face Protection
 - c. Lung Protection
 - d. Foot & Hand Protection
 - e. Body Protection

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ANSWER KEY 2.2-1

1. What is PPE?

Personal Protective Equipment or PPE is any clothing, equipment or substance designed to protect a person from risks of injury or illness

- 2. Give examples for each type of PPE.
 - a. Ear Protection- Earmuffs and Earplugs
 - b. Eyes and Face Protection- Goggles and Face Shields
 - c. Lung Protection- Respirators/Masks
 - d. Foot & Hand Protection-Gloves, Safety Boots, Leggings
 - e. Body Protection- Apron, Uniforms, Vests, Lifejackets

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LEARNING OUTCOME 3

FOLLOW EMERGENCY RESPONSE PROCEDURES

CONTENTS:

1. Identify and report emergency situations according to workplace reporting requirements

2. Follow emergency procedures as appropriate to the nature of the emergency and according to workplace procedures.

3. Follow workplace procedures for dealing with accidents, fires, emergencies whenever necessary within scope of responsibilities.

ASSESSMENT CRITERIA

- 1. Emergency situations are identified and reported according to workplace reporting requirements.
- 2. Emergency procedures are followed as appropriate to the nature of the emergency and according to workplace procedures.
- 3. Workplace procedures for dealing with accidents, fires, and emergencies are followed whenever necessary within scope of responsibilities.

CONDITIONS:

Trainees must be provided with the following:

• Personal Protective equipment

Learning Materials

- Books, manuals
- Modules/references

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LEARNING ACTIVITIES

LEARNING OUTCOME:

Follow Emergency Response Procedures

LEARNING ACTIVITIES	RESOURCE/SPECIAL INSTRUCTIONS
Familiarizing on Work-Related Injuries and First Aid Treatment Procedures	 Read Information Sheet 2.3-1 Answer Self Check 2.3-1 Compare your answer to the Answer Key 2.3-1 Perform Activity Sheet 2.3-1 Check your work using Performance Criteria Checklist 2.3-1
Practicing Proper Use of Fire Extinguisher	 Read Information Sheet 2.3-2 Answer Self Check 2.3-2 Compare your answer to the Answer Key 2.3-2

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INFORMATION SHEET 2.3-1 Work-Related Injuries and First Aid Treatment

Learning Objectives:

After reading this INFORMATION SHEET, you will be able to identify different workrelated injuries and procedures for first aid treatment.

Types of Work-Related Injuries

Accident prevention is the concerned of every individual. People with pride in their work consider not only their own safety but the safety of others. If knowledge and foresight were the first requirements of skilled work, most serious accidents would be avoided. It is a good idea to remember, before starting any project that, "accidents don't just happen". They are cause by ignorance and carelessness.

Hazard causes injuries and illnesses right away. Other hazards may not cause an injury or illness until much later in life. Workers experienced injuries are cautious to do the same practices causing them to be injured. It has been observed that workers feel not comfortable with their works once afflicted with injuries.

The following are welding related injuries that cause the good performance of the workers.

1. Burns. The most common and painful injuries that occur in the workshop.

Types of Burn Injuries

- 1. Thermal Burns. Not all thermal burns are cause by flames. Contact with hot objects, flammable vapor that ignites and causes a flash or an explosion, and steams or hot liquid are other common causes of burns.
- 2. Chemical Burns. Chemical will continue to cause tissue destruction until the chemical agent is removed.
- 3. Electrical Burns. The injury severity from exposure to electrical current depends on the type of current (direct or alternating), the voltage, the area of the body exposed, and the duration of contact.

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Classification of Burns

Burns are classified depending on the severity of burns.

- a. First-degree Burn. Burns occurred when the surface of the skin is reddish in color, tender, and painful and does not involve any broken skin.
- b. Second-degree Burn. Burns occurred when the surface of the skin is severely damaged, resulting in the formation of blisters and possible breaks in the skin.
- c. Third-degree Burn. Burns occurred when the surface of the skin and possibly the tissue below the skin appear white or charred. Initially, little pain is present because nerve endings have been destroyed.
- 2. Wounds. Break in the continuity of a tissue of the body either internal or external.

Two Classifications of Wounds

a. Closed Wound

Causes:

- Blunt object result in contusion or bruises
- Application of external forces

b. Open Wound

Classification of Open Wound

- Puncture penetrating pointed instruments such as nails, ice picks, daggers, etc.
- Abrasion scrapping or rubbing against rough surfaces
- Laceration blunt instruments such as shrapnel, rocks, broken glasses, etc.
- Avulsion explosion, animal bites, mishandling of tools, etc.
- Incision sharp bladed instruments such as blades, razors, etc.

First Aid Treatment Procedures

First aid is an immediate care given to a person who has been injured or suddenly taken ill. It includes self-help and home care if medical assistance is not available or delayed.

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Objectives of First Aid

- 1. To alleviate suffering
- 2. To prevent added/further injury or danger
- 3. To prolong life

Hindrances in Giving First Aid

- 1. Unfavorable surroundings
- 2. The presence of crowds
- 3. Pressure from victim or relatives

First Aid Equipment and Supplies

- 1. Basic Equipment
 - Spine board
 - Short board
 - Sets of splints
 - Poles
 - Blankets
- 2. Suggested Basic First Aid Kit Contents
 - Rubbing alcohol
 - Povidone iodine
 - Cotton
 - Gauge pads
 - Tongue depressor
 - Penlight
 - Band aid

- Gloves
- Scissors
- Forceps
- Bandages (Triangular)
- Elastic roller bandages
- Occlusive dressings
- Plaster
- 3. Clothe Material Commonly used in First Aid
 - Dressing any sterile cloth material used to cover the wound
 - Bandages any clean cloth material sterile or not use to hold the dressing in place.

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Guidelines in Giving First Aid Treatment

Getting Started

- 1. Planning of action
- 2. Gathering needed materials
- 3. Remember the initial response as follows:

A – ask for help

I – intervene

D – do no further harm

4. Instruction to helpers

Emergency Action Principle

- 1. Survey and Scene
 - Is the scene safe?
 - What happened?
 - How many people are injured?
 - Are there bystanders who can help?
 - Identify yourself as a trained first aider.
 - Get consent to give care?
 - Checking for responsiveness
- 2. Activate EMS
 - Depending on the situation:
 - Phone first or phone fast.
 - A bystander should make the telephone call for help (If available).
 - A bystander will be requested to call for a physician.
 - Somebody will be asked to arrange for transfer facility.
 - Information to be remembered in activating medical assistance:
 - What happened?

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- Location?
- Number of persons injured?
- Extent of injury and first aid given?
- The telephone number from where you are calling?
- Person who activated medical assistance must identify him/herself and drop the phone last.
- 3. Primary Survey
 - Check for airway
 - Ways in opening the airway
 - 1. Head Tilt-Chin Lift Maneuver
 - 2. Jaw-Thrust Maneuver
 - Check for breathing
 - Check for circulation
- 4. Secondary Survey
 - Interview the victim.
 - Ask the victim's name.
 - Ask what happened.
 - Assess the sample history
 - Check the vital signs
 - Determine radial or carotid pulse (pulse rate)

Adult	60 – 90/min
Child	80 – 100/min
Infant	100 – 120/min

- Determine breathing (respiration rate)

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Adult	12 – 20/min
Child	18 – 25/min
Infant	25 – 35/min

• Do Head-to-toe examination looking for DCAP-BTLS (Deformity, Contusion, Abrasion, Puncture, Burn, Tenderness, Laceration, Swelling)

Golden Rules in Giving Emergency Care

- 1. What to Do:
 - Do obtain consent when possible.
 - Do think the worst. It's best to administer first aid for the gravest possibility.
 - Do remember to identify yourself to the victim.
 - Do provide comfort and emotional support.
 - Do respect the victim's modesty and physical privacy.
 - Do be as calm and as direct as possible.
 - Do care for the most serious injuries first.
 - Do assist the victim with his or her prescription medication.
 - Do keep onlookers away from the injured person.
 - Do handle the victim to a minimum.
 - Do loosen tight clothing.
- 2. What Not to Do:
 - Do not let the victim see his/her injury.
 - Do not leave the victim alone except to get help.
 - Do not assume that the victim's obvious injuries are the only ones.
 - Do not make any unrealistic promises.
 - Do not trust the judgment of a confused victim and require them to make decision.

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Proper Handling of Injured Victim

Extrication is a rapid movement of patient from unsafe place to a place of safety.

Indications for Emergency Rescue

- 1. Danger of fire or explosion.
- 2. Danger of toxic gases or asphyxia due to lack of oxygen.
- 3. Serious traffic hazards.
- 4. Risk of drowning.
- 5. Danger of electrocution.
- 6. Danger of collapsing walls.

Methods of Rescue

- 1. For immediate rescue without any assistance, drag or pull the victim.
- 2. Most of the one-man drags/carries and other transfer methods can be used as methods of rescue.

Transfer is moving a patient from one place to another after giving first aid.

Factors to be considered in the selection of choosing the transfer method:

- 1. Nature and severity of the injury.
- 2. Size of the victim.
- 3. Physical capabilities of the first aider.
- 4. Number of personnel and equipment available.
- 5. Nature of evacuation route.
- 6. Distance to be covered.
- 7. Gender of the victims (last consideration).

Pointers to be observed during transfer.

- 1. Victim's airway must be maintained open.
- 2. Hemorrhage is controlled.

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- 3. Victim is safely maintained in the proper position.
- 4. Regular check of the victim's condition is made.
- 5. Supporting bandages and dressings remain effectively applied.
- 6. The method of transfer is safe, comfortable and as speedy as circumstances permit.
- 7. The patient's body is moved as one unit.
- 8. The taller first aiders stay at the head side of the victim.
- 9. First Aider's/bearer must observe ergonomics in lifting and moving of patient.

Methods of Transfer

- 1. One-man assist/carries/drags
 - Assist to walk
 - Carry in arms (cradle)
 - Pack strap carry
 - Piggy back carry
 - Fireman's carry
 - Fireman's drag
 - Blanket drag
 - Armpit/shoulder drag
 - Cloth drag
 - Feet drag
 - Inclined drag (head first passing a stairway)
- 2. Two-man assist/carries
 - Assist to walk
 - Four-hand seat
 - Hands as a litter
 - Carry by extremities
 - Fireman's carry with assistance
- 3. Three-man assist/carries

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- Bearers alongside (for narrow alleys)
- Hammock carry
- 4. Four/six/eight-man carry
- 5. Blanket (demonstrate the insertion, testing and lifting of blanket)
- 6. Improvised stretcher using two poles with:
 - Blanket
 - Empty sacks
 - Shirts of coats
 - Triangular bandages
- 7. Commercial stretcher
- 8. Ambulance or rescue van
- 9. Other vehicles

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SELF-CHECK 2.3-1

Multiple Choice:

Direction: Read and analyse the statement carefully. Choose the best answer and write the letter only in your answer sheet.

- 1. When you accidentally cut your finger with a knife, it is called a:
 - a. Avulsion
 - b. Incision
 - c. Puncture
 - d. Abrasion
- 2. An immediate care given to a person who has been injured or suddenly taken ill.
 - a. care
 - b. nurse
 - c. first aid
 - d. care and nurse
- 3. These are important rules in giving emergency care to a victim except,
 - a. provide comfort and emotional support.
 - b. trust the judgment of a confused victim
 - c. remember to identify yourself to the victim
 - d. administer first aid for the gravest possibility
- 4. These are indications of emergency rescue in the workplace except
 - a. presence of fire
 - b. danger of explosion
 - c. serious traffic hazards
 - d. danger of electrocution
- 5. When transferring the victim from one place to another, the first thing to observed always.
 - a. hemorrhage is controlled
 - b. safely maintained in the proper position
 - c. regularly check the condition of the victim
 - d. victim's airway must be maintained open

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ANSWER KEY 2.3-1

- 1. b
- 2. c
- 3. b
- 4. c
- 5. d

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ACTIVITY SHEET 2.3-1				
Activity Title	Emergency Situation Role Playing			
Purpose	To role-play an emergency situation and respond appropriately			
Supplies/Materials	Work station, first aid kit, emergency response kit			
Procedures:	 Make a group consisting of 5 trainees in your class Select on the emergencies discussed in this module Make a script for a role-play Ask your trainer if your group is ready to perform Perform the role play with consideration on proper emergency responses 			
Assessment Method:	Performance Criteria Checklist			

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PERFORMANCE CRITERIA CHECKLIST 2.3-1

Criteria		
Did I	YES	NO
 Identify and report emergency situations according to workplace requirements? 		
2. Follow emergency procedures as appropriate to the nature of the emergency?		

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INFORMATION SHEET 2.3-2 Proper Use of Fire Extinguisher

Learning Objectives:

After reading this INFORMATION SHEET, you will be able to demonstrate proper use of fire extinguisher.

Proper Use of Fire Extinguisher

A fire extinguisher works by breaking the fire triangle of heat, fuel, and oxygen. Most extinguishers both cool the fire and remove the oxygen. They use a variety of materials to extinguish the fire. The majority of fire extinguishers found in welding shops use foam, carbon dioxide, a soda-acid gas cartridge, pump tank, or dry chemicals

When using **foam extinguisher**: Don't spray the stream directly into the burning liquid. Allow the foam to fall lightly on the fire.

When using a **carbon dioxide extinguisher**: Direct the discharge as close to the fire as possible, first at the edge of the flames and gradually to the center.

When using a **soda-acid gas cartridge extinguisher**: Place your foot on the footrest and direct the stream at the base of the flames.

When using a **dry chemical extinguisher**: Direct the extinguisher at the base of the flames. In the case of Class A fires, follow up by directing the dry chemicals at the remaining materials still burning. Therefore, the extinguisher must be directed at the base of the fire where the fuel is located.

Steps in Extinguishing Fire using Portable Fire Extinguisher

1. Approach the fire no closer than 1.8 m from the fire.

Figure 28. Approaching Fires

2. Grasp the fire extinguisher firmly and pull out the lock pin.

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Figure 29. Pulling out the lock pin

3. Aim nozzle at the base of the fire and squeeze the handles.

Figure 30. Aiming the nozzle



4. Use side-to-side motion to blanket the fire.

Figure 31. Side to Side motion



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In another way of proper operation of fire extinguisher is applying the word "PASS".

- P ull the pin of the fire extinguisher
- A im the nozzle at the bottom of fire
- S queeze the handle of the fire extinguisher
- S weep or side-to-side motion.

Figure 31. Extinguishing Fires



Actions to be taken if a fire starts

- 1. Stop the fire immediately on discovery with the first air fire fighting equipment available.
- 2. Warn everyone in the area.
- 3. Contact your supervisor so that a warning is issued and fire equipment is rushed to the area.

Stop fighting the fire and leave the area if,

- 1. The fire is beyond control
- 2. Escape route is threatened by fire
- 3. Smoke obscures or threatens to obscure the escape route.

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SELF-CHECK 2.3-2

Multiple Choice:

Direction: Read and analyze the statement carefully. Choose the best answer and write the letter only in your answer sheet.

- 1. What is the approximate distance of the fire fighter away from the fire using fire extinguisher?
 - a. 1.2 meter
 - b. 1.5 meter
 - c. 1.8 meter
 - d. 2.0 meter
- 2. This type of fire extinguisher is not allowed to spray directly into the burning liquid?
 - a. foam extinguisher
 - b. soda-acid fire extinguisher
 - c. dry chemical fire extinguisher
 - d. carbon dioxide fire extinguisher
- 3. To extinguish a fire, it is best practice aiming the nozzle of fire extinguishers at the
 - a. material burning
 - b. near the flame
 - c. base of the flames
 - d. edge of the flames

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ANSWER KEY 2.3-2

- 1. c 2. a
- 3. c

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LEARNING OUTCOME 4:

MAINTAIN AND IMPROVE HEALTH AND SAFETY IN THE WORKPLACE

CONTENTS:

- 1. Identify risks and implement appropriate control measures in the work area.
- 2. Implement recommendations arising from risk assessments within level of responsibility.
- 3. Identify and raise opportunities for improving OSH performance with relevant personnel.
- 4. Maintain safety records according to company policies.

ASSESSMENT CRITERIA

- 1. Risks are identified and appropriate control measures are implemented in the work area.
- 2. Recommendations arising from risk assessments are implemented within level of responsibility.
- 3. Opportunities for improving OSH performance are identified and raised with relevant personnel.
- 4. Safety records are maintained according to company policies.

CONDITIONS:

Trainees must be provided with the following:

• Personal Protective equipment

Learning Materials

- Books, manuals
- Modules/references

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LEARNING ACTIVITIES

LEARNING OUTCOME:

Maintain and Improve Health and Safety in the Workplace

LEARNING ACTIVITIES	RESOURCE/SPECIAL INSTRUCTIONS
Understanding 5S	 Read Information Sheet 2.4-1 Answer Self Check 2.4-1 Compare your answer to the Answer Key 2.4-1
Identifying Causes of Accidents and General Environment Control Measures	 Read Information Sheet 2.4-2 Perform Activity Sheet 2.4-2 Check your work using Performance Criteria Checklist 2.4- 2

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INFORMATION SHEET 2.4-1 5S System

Learning Objectives:

After reading this INFORMATION SHEET, you will be able to explain and observe the 5S system and its relation to maintenance and improvement of health and safety in the workplace.

What is 5S?

- It is a systematized approach to organize work areas, keep rules and standards, and maintain discipline to do good job.
- The practice of 5S develops positive attitude among workers and cultivates an environment of efficiency, effectiveness and economy.
- It utilizes workplace organization and work simplification techniques to make work easier, faster, cheaper, safer and more effective.

Japanese	English
Seiri	Sort
Seiton	Systematize
Seiso	Sweep
Seiketsu	Standardize
Shitsuke	Self-discipline

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1. SEIRI (Sort)

Sort out unnecessary items and dispose them properly.

- a. Make work easier by eliminating obstacles.
- b. Provide no chance being disturbed by unnecessary items.
- c. Eliminate the need to take care of the unnecessary items.
- d. Prevents accumulation of unnecessary items.



SORT / CLEARING

Throw away unnecessary and unrelated materials in your workplace.

2. SEITON (Systematize)

Arrange necessary items in good order so that they can easily pick for use.

- a. Classify necessary items into frequency of handling.
- b. Locate jigs and tools that are used very often near to the point of use.
- c. Locate the material at the defined position to ensure "First-in, Firstout", as well as to make the work easy.
- d. Store and dies molds together with the specific tools necessary for this set-up.
- e. Clearly label machinery, equipment parts, jigs, tools and their locations so that everything is understandable and visible to everyone at a glance.



SET / ORGANIZE

Set everything in proper place for quick retrieval and storage

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3. SEISO (Sweep)

Clean your workplace completely so that there are no dust on the floor, machinery and equipment.

- a. To make the workplace clean, safe and comfortable.
- b. To make it easy to produce quality products.
- c. To check whether the machinery and equipment are in good condition or not.
- d. Assign responsible persons to each machine, equipment and area.



4. SEIKETSU (Standardize)

Maintain high standard of workplace organization and housekeeping at all times.

- a. To prevent the deterioration of Seiri, Seiton, and Seiso activities.
- b. To minimize causes that will make the workplace dirty and uncomfortable.
- c. To protect workers from dangerous conditions.
- d. To make the workers happy and vivid giving them a chance to present their talent and creativity.



STANDARDIZE

Standardize the way of maintaining order and cleanliness

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5. SHITKUSE (Self-discipline)

Do things spontaneously without being told or ordered.

- a. Seiri, Seiton, Seiso, Shitsuke, these 4S's are techniques and actions to make the workplace well-organized.
- b. Shitsuke is a condition in which all members practice these 4S's continuously, spontaneously and willingly.
- c. Shitsuke is the creation of strong cooperation culture filled with spirit of high productivity through implementation of these 4S's, as well as motivation, education and training for all the members.
- d. Management should give good examples.



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SELF-CHECK 2.4-1

Matching Type:

Direction: Read the instruction carefully. Match column A with column B. Write letters of the correct answer on the blanks provided before the number. Use separate answer sheet.

Column A	Column B
1. standardize	A. Clean your workplace completely so that there is no dust on the floor, machinery and equipment.
2. sort	 B. Do things spontaneously without being told or ordered.
3.self-discipline	C. Sort out unnecessary items and dispose them properly.
4. systematize	D. Maintain high standard of workplace organization and housekeeping at all times.
5. sweep	E. Arrange necessary items in good order so that they can easily pick for use.

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ANSWER KEY 2.4-1

- 1. D
- 2. C
- 3. B
- 4. E
- 5. A

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INFORMATION SHEET 2.4-2 Causes of Accidents and Control Measures

Learning Objectives:

After reading this INFORMATION SHEET, you will be able to identify the causes of accidents and risks and control measures to address hazards in the workplace.

Causes of Accidents

Accidents in the workplace happen for a number of reasons. The results of a workplace accident can be minimal or tragic, causing minor injury, damage to equipment or even in some cases, major injury or death. Employees need to stay alert and aware at all times to avoid accidents, while managers need to know the most common causes for workplace accidents and be able to spot the risk factors early to prevent one.

An accident or mishap is an unforeseen and unplanned event or circumstance, often with lack of intention or necessity. It implies a generally negative outcome which may have been avoided or prevented had circumstances leading up to the accident been recognized, and acted upon, prior to its occurrence.

Primary Causes of Accidents

Unsafe Acts

This refers to the human action that departs from a standard or written job procedure or common practice, safety rules, regulations or instructions.

Reasons for Unsafe Act

- 1. Improper Attitude
- 2. Lack of Knowledge or Skills
- 3. Physical Unsuitability
- 4. Improper Mechanical or Physical Environment

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Figure 32. Examples of Unsafe Acts



Workers without safety gloves and and safety harness working



Workers without any safety harness other safety gadgets for working

Unsafe Conditions

This refers to the physical or chemical property of a material, machine or the environment which could result in injury to a person, damage or destruction to property of other forms of losses.

Figure 33. Examples of Unsafe Conditions



Improper storage of cylinders and set up of the cables



Uncovered fused

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General Environment Control Measures

A systematic and thorough review of workshop activities should be carried out to identify the significant hazards and who is at risk of harm or injury. Many of the hazards associated with individual items of workshop equipment are similar, and an efficient way of conducting the assessment is to group hazards in relation to workshop activities which are the approach followed in this document. It is equally valid to carry out risk assessments in other ways, for example in relation to individual items of equipment or processes.

General Environment Control Measures

- 1. Engineering Control
 - Substitution
 - Modification in Process/Equipment





• Maintenance of Equipment



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Isolation

Prior to entry into a confined space, the space should be isolated to prevent any hazardous materials from entering.



Industrial Ventilation

A confined space should always be ventilated with adequate fresh air by means of air blowers with trucking or extension hoses before and after entry





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- 2. Administrative Control
 - Reduction of work period
 - Adjusting work schedules
 - Employee information and training
 - Job rotation
 - Education of supervisors
 - Housekeeping and maintenance
- 3. Use of Personal Protective Equipment
 - Dust/Gas respirators
 - Safety goggles/spectacles
 - Face shields
 - Earplugs/earmuffs
 - Aprons
 - Safety shoes
 - Helmets
 - Gloves

Table below shows the following hazards identified in the workplace and the control measures to be undertaken.

		Enviro	onmental Control	Measures
	Hazards	Engineering Control	Administrative Control	Use of PPE
1.	Electric shock on power tools	Have regular maintenance and inspection on power tools		
2.	Noise	Provide sound proof		Provide Earplugs/earmuffs
3.	Entanglement, drawing-in and crushing	Have regular maintenance on equipment		

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4.	Dust in the workplace		Have regular housekeeping	Provide eye and respiratory protection
5.	No machine guards on cutting, shearing, and crushing equipments	Provide fitted machine guards		
6.	High temperature in the workplace			Suitable welding clothes, shields and goggles are provided

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	ACTIVITY SHEET 2.4-2	
Activity Title	Identifying Risks, Hazards and Control Measures in the Workplace	
Purpose	To observe risks in health and safety at the workplace and suggest control measures	
Supplies/Materials	Work station, pen, paper	
Procedure:	 You can work individually or in pairs or groups of three. Ask your trainer for an assigned workstation to observe. Visit the workstation and list down all your observations of unsafe acts and unsafe conditions Use the Table 1 below as template for your observations. Analyze the table then fill up Table 2 on control measures to be undertaken for the identified the workplace hazards. Submit your work to your trainer. 	
Assessment Method:	Performance Criteria Checklist	

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Table 1.

Causes of Accidents in the Workplace			
Unsafe Acts	Unsafe Conditions		

Table 2.

	Environmental Control Measures			
Hazards	Engineering Control	Administrative Control	Use of PPE	

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PERFORMANCE CRITERIA CHECKLIST 2.4-2

Criteria		
Did I	YES	NO
 Identify risks and appropriate control measures in the work area? 		
2. Identify opportunities for improving OSH performance?		

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REVIEW OF COMPETENCY

Below is a performance criteria checklist for Applying OSH Practices in the Workplace

	Performance Criteria	Yes	No
1.	Immediate work area is routinely checked for OSH hazards prior to commencing and during work.		
2.	Hazards and unacceptable performance are identified and corrective action is taken within the level of responsibility.		
3.	OSH hazards and incidents are reported to appropriate personnel according to workplace procedures.		
4.	Safety Signs and symbols are identified and followed		
5.	Apply OSH practices in the workplace.		
6.	Appropriate personal protective equipment (PPE) is selected and worn.		
7.	Emergency situations are identified and reported according to workplace reporting requirements.		
8.	Emergency procedures are followed as appropriate to the nature of the emergency and according to workplace procedures.		
9.	Workplace procedures for dealing with accidents, fires and emergencies are followed whenever necessary within scope of responsibilities.		
10	Risks are identified and appropriate control measures are implemented in the work area.		
11.	Recommendations arising from risk assessments are implemented within level of responsibility.		
12	Opportunities for improving OSH performance are identified and raised with relevant personnel.		
13	Maintain safety records according to company policies.		

I now feel ready to undertake my formal competency assessment.

Signed:

Date:

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