Ethiopian TVET System

Animal Health Care Service Level -I

Training Module –Learning Guide 06-09

Based on Version 3 March 2018 Occupational Standard (OS)

Unit of Competence: Follow Occupational Health and Support Procedure

Module Title: Following Occupational Health and Support Procedure

TTLM Code: AGR HC1 TTLM2 09 19v1

October 2019

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This module includes the following Learning Guides

LG6: Recognize hazards

(LG Code: AGRHC1 M2 LO1-LG-6

LG7: Follow procedures for hazard control

(LG Code: AGRHC1 M2 LO2-LG-7

LG8: Follow emergency procedure

(LG Code: AGRHC1 M2 LO3-LG-8

LG9: Report problems.

(LG Code: AGRHC1 M2 LO4-LG-9)

Instruction Sheet	Learning Guide 06#

This learning guide is developed to provide you the necessary information regarding the following **content coverage** and topics –

- Identifying ***Hazards*** commonly found in the workplace.
- Checking Work area routinely before and during work
- Describing causes of identifying hazards

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, **you will be able to –**

- Identify ***Hazards*** commonly found in the workplace.
- Check work area routinely before and during work
- Describe the causes of Identified hazards according to organizational procedures according to organizational procedures

Learning Instructions:

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below 3 to 6.
3. Read the information written in the information “Sheet 1, Sheet 2, Sheet 3 and Sheet 4”.
4. Accomplish the “Self-check 1, Self-check t 2, Self-check 3 and Self-check 4” in page -6, 9, 12 and 14 respectively.
5. If you earned a satisfactory evaluation from the “Self-check” proceed to “Operation Sheet 1, Operation Sheet 2 and Operation Sheet 3 ” in page -15.
6. Do the “LAP test” in page – 16 (if you are ready).

Information Sheet-1	Identifying **Hazards** commonly found in the workplace.

1.1 Concept of hazards

The term hazard: A hazard is anything that has the potential to harm the health or Safety of a person or an animal.

The hazard identification process is designed to identify all the possible situations where people may possibly be exposed to injury, illness and disease arising from all sources including the above.

Prior to the introduction of any plant, substances, processes or work practices in the workplace, it is essential for the hazard identification process to be carried out to identify whether there is any potential for injury, illness or disease associated with such introduction. This will assist you to take the necessary actions for what may otherwise be extremely costly further down the track if no action is taken at this early stage.

Carrying out hazard identification for all existing plant, substances, processes and work practices in your workplace may require some effort. If you have a large workplace, it is a good idea to split it into several discrete areas for the hazard identification process, and to tackle one area at a time. Priority should be given to areas with hazardous plant, substances, processes or environment.

In order to minimize the time involved, it is better to perform hazard identification on all sources of hazards in a particular area of the workplace instead of doing each hazard source (e.g. plant, hazardous substances etc) at a time.

The relevant health and safety representatives need to be consulted during the hazard identification process. Employees working in the area have day to day experience of any hazards and should be involved in the hazard identification process. Advice should also be sought from people who are associated with the activities and processes in the area because they may provide valuable input.

Hazards in the workplace can change from day to day. In order to effectively manage workplace health and safety you need to introduce proper systems and procedures to

ensure hazard identification is carried out on a regular basis. The OHS legislation requires you to repeat the hazard identification process:

1.2 Types of hazards

1. **Physical Hazards:** this can be electrical equipment's, open flames, lab. Instruments and glassware can all be hazardous if improperly used.
   - **Electricity:** is one of the most important physical hazards, when the electrical equipment's are use, the technicians should follow the use instruction. In the lab work should avoid electrical overloaded. They are a potential fire hazard and can also cause equipment damage.
   - **Fire:**is other of the most important physical hazards, but is not common. It can occur when open flames, such as Bunsen burners, are in use. It can damage clothing and long hair if are near to the fire. When necessary use is any flammable chemicals is better keep in a flameproof cabinet. In case of fire, in the lab should be fire extinguisher and any escape route in case of the exit is blocked.
   - **Laboratory equipment:** during working with autoclave, the technician should work carefully trying to avoid any explosions and burns; because it use pressurized steam to sterilize surgical instruments, glassware, sterile solutions, materials to be used in microbiology, for decontaminate materials such as blood specimens, bacterial cultures or filled biohazard containers before disposal and other materials present special hazards, etc.
2. **Chemical hazards** can be flammable, toxic, caustic, corrosive, carcinogen or mutagenic.

   All chemicals must be labeled with**"hazard information"** on the containers

3. **Biological hazards:**

It can be contaminated with bacteria, virus, fungus, or parasites. It can produce also by bite from the laboratory animals. In microbiology lab, making any bacteriological culture is recommendable in the microbiological safety cabinet. Avoid contact from biological culture. After any lab work, the technician and all surfaces must be disinfected with known disinfectants.

4. Allergic hazards:

Allergic hazards associated with breathing or contacting animal dander or urine allergens (among others). The safest policy is to reduce exposureby wearing protective clothing (such as facemasks, gloves, and a lab coat) when handling animals.

Self-Check -1	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Define hazards? (2pts)
2. List the type of hazards and explain each of them. (6 points)

Note: **Satisfactory rating - 2 and 6 points** **Unsatisfactory - below 2and 6 points**

You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

Information Sheet- 2	Checking Work area routinely before and during work

Work area: is the place where persons do any things. eg laboratory

2.1 Animal laboratory

Laboratory is a place where specimens for biological examination tested and analyzed. Examination may be macroscopic or microscopic and it is performed manually or using specialized instruments by aid of chemicals and reagents. Due to this, lab technicians must have the skill to perform varies duties, including handling of different instruments, chemicals and reagents with their use during lab work.

Every lab technician must aware of the potential danger of chemicals, electrical, biological hazard to safe he and his partner during work. Keeping the living things in the vicinity and pollution of environment from any lab hazard is on the hand of lab technician.

So, to avoid /minimize/ risk there is many safety regulations. Most problems may happen due to carelessness, neglect and shortage of knowledge. Therefore, to avoid accidents, lab technicians and students must follow all safety procedures in the lab.

A. Preparing for laboratory work

Before starting to work in a laboratory, familiarize yourself with the following:

- The hazards of the materials in the work place as well as appropriate safe handling, storage and emergency protocols. Read labels and material safety data sheets (MSDSs) before moving, handling or opening chemicals. Never use a product from an unlabeled container, and report missing labels to your supervisor.
- The agents, processes and equipment in the laboratory. If you are unsure of any aspect of a procedure, check with your supervisor before proceeding.
- the location and operation of safety and emergency equipment such as fire extinguishers, eye wash and shower, first aid and spill response kits, fire alarm pull stations, telephone and emergency exits
- Emergency spill response procedures for the materials you will handle
- Emergency reporting procedures and telephone numbers
- designated and alternate escape routes

B. During laboratory work

- Restrict laboratory access to authorized persons only. Children are not permitted in labs.
- Smoking; eating; drinking; storing food, beverages or tobacco; applying cosmetics or lip balm and handling contact lenses are not permitted in laboratories.
- Wear lab coats (knee length) and safety glasses in laboratories employing chemicals, biohazards or radioisotopes. Open shoes, such as sandals, should never be worn in the lab.
- Tie back or otherwise restrain long hair when working with chemicals, biohazards, radioisotopes, or moving machinery.
- Keep work places clean and free of unwanted chemicals, biological specimens, radios, and idle equipment. Avoid leaving reagent bottles, empty or full, on the floor.
- Work only with materials once you know their flammability, reactivity, toxicity, safe handling and storage and emergency procedures.
- Consult material safety data sheets (MSDS) before working with hazardous chemicals or infectious material. Replace MSDS that are more than 3 years old.
- Prepare and maintain a chemical inventory for the lab.
- Never pipette by mouth; use mechanical transfer devices.
- Walk; do not run, in the lab.
- Keep exits and passageways clear at all times.
- Ensure that access to emergency equipment (eyewashes, safety showers and fire extinguishers) is not blocked.
- Report accidents and dangerous incidents ("near-misses") promptly to your supervisor
- Wash your hands thoroughly before leaving the laboratory.
- Conduct procedures involving the release of volatile toxic or flammable materials in a chemical fume hood.
- Handle all blood and body fluids as if potentially infectious

C. Cleaning up before leaving

Perform a safety check at the end of each experiment and before leaving the lab. Make sure to:

- Turn off gas, water, electricity, vacuum and compression lines and heating apparatus
- Return unused materials, equipment and apparatus to their proper storage locations
- Label, package and dispose of all waste material properly
- Remove defective or damaged equipment immediately, and arrange to have it repaired or replaced
- Decontaminate any equipment or work areas that may have been in contact with hazardous materials.
- Leave behind protective clothing (lab coats, gloves, etc.) when leaving the laboratory
- Close and lock the door to the laboratory if you are the last one to leave

Self-Check -2	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What is the importance of checking hazards in the work (2pts?)
2. List the certain .hazards can occur in the laboratory (4 points)

Note: Satisfactory rating - 2 and 4 points Unsatisfactory - below 2and 4 points

You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

Information Sheet- 3	**Describe the causes of Identified hazards according to organizational procedures**

3.1 Causes of Workplace Hazards

In your workplace, you no doubt want to keep your employees safe. However, even with proper security measures, your workers are still at risk of injury or illness due to the some common hazards. By identifying both common and uncommon hazards in your workplace and educating your employees on avoiding potential injuries or illnesses during work, you can further protect their safety.

Causes

- **Fire**

The first workplace hazard is the risk of a fire breaking out. There are many different reasons a fire might break out in your building, including chemical spills, machinery or equipment malfunctioning, gaseous containers, electrical failures, not discarding flammable materials properly and many other reasons. To protect your employees, have fire extinguishers in the building and educate your employees on how to use them properly. You should also have designated fire exits.

- **Slips and fall**

Next is the risk of a slip and fall which is a risk regardless of where you work and what kind of business you have. A slip could be as simple as a spill in the break room that hadn't been cleaned up yet or falling over a computer cord in the aisle. Tile and linoleum flooring is also a risk, which is common in break rooms and restrooms. If it was recently waxed, that increases the risk even further.

- **Chemicals**

Another workplace hazard you should protect is chemicals. Be sure your employees understand what chemicals they might find in the workplace and how to dispose of them properly. Chemical handling mistakes are a common reason for chemical-related

illnesses. Chemicals could be anything from liquids and gases to the fumes, dust, solids or vapors. Ingesting, absorbing in the skin and inhaling the fumes may all be hazards.

- **Electrical Hazards**

This is a workplace hazard that most employees don't notice until it causes an injury or fire in the building. Electrical hazards could be from liquids near electrical outlets,

malfunctioning power strips, extension cords coming into contact with water or fraying cords.

- **Back Injury**

Lifting heavy objects or doing lifting and bending over repetitively throughout the day can also cause injury to your employees. Even when using the proper lifting form, such as keeping the back straight and not bending over to pick up the items, a back injury could occur.

Hazardous Materials

There are also hazardous materials aside from chemicals that could cause illness to your employees. This includes toxic waste and hazardous materials that may cause skin infection, burn, respiratory disease, cause an explosion and fire or even blindness. As with chemicals, be sure employees wear protective gear and practice caution when around any type of hazardous material.

- **Biological hazards**

It can be contaminated with bacteria, virus, fungus, or parasites. It can produce also by bite from the laboratory animals. In microbiology lab, making any bacteriological culture is recommendable in the microbiological safety cabinet. Avoid contact from biological culture. After any lab work, the technician and all surfaces must be disinfected with known disinfectants.

Self-Check -2	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. List causes of hazards encountered in the work place (3)

2. What is the benefit of hazard identification? (5)

Note: Satisfactory rating - 3 and 5 points Unsatisfactory - below 3 and 5 points
You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

Operation Sheet 1	**Method of Identifying hazards**

The method of identifying hazards about resource providers are:

1. List out orderly all resource providers to identifying hazards
2. Define PPE necessary to do the Identification of work place hazards.
3. Apply method of identification of hazards such as hazard
    - assessment

- Identification
- Implementation and
- Control.

4. Send the completed documents to supervisor/ concerned body

Instruction Sheet	Learning Guide 07 #

This learning guide is developed to provide you the necessary information regarding the following **content coverage** and topics –

- Following Procedures to remove or minimise hazards
- Using Required **PPE *and safetyequipment***
- Describing the potential consequences of failing to follow these procedures and Instructions

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, **you will be able to –**

- Follow procedures to remove or minimize hazards, within the scope of responsibilities and competencies.
- Use required PPE and safety equipment according to organizational policy
- Describe the potential consequences of failing to follow these procedures according to organizational guideline

Learning Instructions:

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below 3 to 6.
3. Read the information written in the information “Sheet 1, Sheet 2, Sheet 3 and Sheet 4”.
4. Accomplish the “Self-check 1, Self-check t 2, Self-check 3 and Self-check 4” in page -6, 9, 12 and 14 respectively.
5. If you earned a satisfactory evaluation from the “Self-check” proceed to “Operation Sheet 1, Operation Sheet 2 and Operation Sheet 3 ” in page -15.
6. Do the “LAP test” in page – 16 (if you are ready).

Information Sheet- 1	Following Procedures to remove or minimise hazards

- **Design or re-organize to eliminate hazards**

It is often cheaper and more practical to eliminate hazards at the design or planning stage of a product, process or place used for work. In these early phases, there is greater scope to design out hazards or incorporate risk control measures that are compatible with the original design and functional requirements. For example, remove trip hazards on the floor or dispose of unwanted chemicals.

- **Substitute the hazard with something safer**

If it is not reasonably practical to eliminate the hazards and associated risks, you should minimize the risk. For example, today the dangers associated with asbestos are well known and there are numerous alternatives to asbestos products currently on the market including cellulose fiber, thermoset plastic flour or polyurethane foams. Replacing solvent- based paints with water-based ones is also a better alternative.

- **Isolate the hazard from people**

This involves physically separating the source of harm from people by distance or using barriers. For example, introducing a strict work area, using guard rails/fence around exposed edges and holes in the floors, using remote control systems to operate machinery, enclosing a noisy process from a person and storing chemicals in a fume cabinet.

- **Use engineering controls**

An engineering control is a control measure that is physical in nature, including a mechanical device or process. For example this can be done through the use of machine guards, effective ventilation systems and setting work rates on a roster to reduce fatigue.

- **Use administrative controls**

Administrative controls are work methods or procedures that are designed to minimize exposure to a hazard. Establish appropriate procedures and safe work practices such as; limit exposure time to a hazardous task so that fewer employees are exposed, routine maintenance and housekeeping procedures, training on hazards and correct work methods and use signs to warn people of a hazard.

- **Use Personal Protective Equipment (PPE)**

Provide suitable and properly maintained PPE and ensure employees are trained in its proper use. Examples include gloves, earplugs, face masks, hard hats, gloves, aprons and protective eyewear. PPE limits exposure to harmful effects of a hazard but only if workers wear and use the PPE correctly.

Self-Check -1	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. List out methods of minimization of hazards (2pts?)

2. Why it's important hazard minimization methods (3 points)

Note: Satisfactory rating - 2 and 3 points Unsatisfactory - below 2and 3 points

You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

Information Sheet- 2	Using Required **PPE and safetyequipment**

As an employer, you are in charge of a safe and healthy working environment for your employees. You are familiar with the safety risks within your sector, as well as the measures you can take to counteract these risks.

2.1 WHAT IS PERSONAL PROTECTIVE EQUIPMENT (PPE)?

PPE means personal protective equipment or equipment you use to guarantee your (own) safety.

Use PPE always and anywhere where necessary. Observe the instructions for use, maintain them well and check regularly if they still offer sufficient protection. But when do you use what type of protection?

2.2 TYPES OF PERSONAL PROTECTIVE EQUIPMENT (PPE)

1. SAFETY FOR THE HEAD

Wearing a **helmet** offers protection and can prevent head injuries. Select a sturdy helmet that is adapted to the working conditions. These days you can find many elegant designs and you can choose extra options such as an adjustable interior harness and comfortable sweatbands.

2. PROTECT YOUR EYES

The eyes are the most complex and fragile parts of our body. Each day, more than 600 people worldwide sustain eye injuries during their work. Thanks to a good pair of **safety glasses**, these injuries could be prevented. Do you come into contact with bright light or infrared radiation? Then **welding goggles or a shield** offer the ideal protection!

3. HEARING PROTECTION

Do you work in an environment with high sound levels? In that case it is very important to consider hearing protection. **Earplugs** are very comfortable, but earmuffs are convenient on the work floor as you can quickly put these on or take them off.

4. MAINTAIN A GOOD RESPIRATION

Wearing a **mask** at work is no luxury, definitely not when coming into contact with hazardous materials. 15% of the employees within the EU inhale vapours, smoke, powder or dusk while performing their job. **Dust masks** offer protection against fine dust and other dangerous particles. If the materials are truly toxic, use a **full-face mask**. This adheres tightly to the face, to protect the nose and mouth against harmful pollution.

5. PROTECT YOUR HANDS WITH THE RIGHT GLOVES

Hands and fingers are often injured, so it is vital to protect them properly. Depending on the sector you work in, you can choose from gloves for **different applications**:

- protection against vibrations
- protection against cuts by sharp materials
- protection against cold or heat
- protection against bacteriological risks
- Protection against splashes from diluted chemicals.

6. PROTECTION FOR THE FEET

Even your feet need solid protection. **Safety shoes** (type Sb, S1, S2 or S3) **and boots** (type S4 or S5) are the ideal solution to protect the feet against heavy weights. An **antiskid sole** is useful when working in a damp environment, definitely if you know that 16,2% of all industrial accidents are caused by tripping or sliding. On slippery surfaces, such as snow and ice, **shoe claws** are recommended. Special socks can provide extra comfort.

7. WEAR THE CORRECT WORK CLOTHING

Preventing accidents is crucial in a crowded workshop. That is why a good visibility at work is a must: a **high-visibility jacket and pants made of a strong fabric** can help prevent accidents. Just like the hand protection, there are versions for different applications.

Self-Check -2	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Why it's important the use of PPE (3 points)
2. List type of personal protective equipment's and explains each of them (7pts)

Note: Satisfactory rating - 3 and 7 points Unsatisfactory - below 3 and 7 points
You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

Information Sheet- 3	Describing the potential consequences of failing to follow these procedures and Instructions

Everyone wants a safe place to live and work. The challenge with livestock farm is that they are workplaces and also places where families live some times. For the people working on the farm, issues of animal safety includes :(livestock safety policies)

3.1 The potential consequences of failing to follow OHS procedures and Instructions

Whenveterinarians are administering drugs to laboratory or any disease suspected animal, they may encounter the following risks:

A) **Animal bites and Scratches**: is an ever present hazard that faces all employees working directly with lab animals or any diagnostic practices.

B) **Zoonosis:** are those diseases that can be transmitted from animals to humans. Some diseases can be transmitted to the professional during animal handling and medicating practices. E.g. bovine TB, anthrax, rabies, Salmonella, Campylobacter, Cryptosporidiosis, Q-fever, Brucellosis, Leptospirosis, enteric bacteria and parasites

C) Inherent hazards: these are some potential hazards inherent in any work environment. These includes poor ergonomics, (the study of working condition, especially design of equipment's, buildings etc) slips and falls, electrical safety hazard etc.

D) The risk of being hurt due to the misuse of equipment or equipment that is poorly maintained

E) **Allergy:**hypersensitivity reactions to the animal allergens are serious occupational health problems that developed in many individuals after repeated exposure. such as animal hair, dander, or secretions such as saliva, urine, and secretions of various glands associated with the skin.

3.2 Consequencesto the animal

During drug administering practices animals might be faced with risks like:

- Allergic reaction with some drugs and site of administration.
- Swelling at the site of drug injection site
- The needle may be broken inside the animal body.
- Drug resistance with respect to the under dosage of the drug and
- Over dosage of the drug which might result even death etc.

3.3 Risks to the public

The drug administered to the animal may result drug resistance on the user/public when they use animal products like egg, milk, meat and if they consumed before the normal withdrawal period of the specific drug administered.

e.g. for most common anthelmentics (drugs that kill or stop growth of parasite) like

- ✓ Albendazole } 8-14 days before meat consumption
- ✓ Febendazole } 3-5 days before milk consumption

Antibaccterial drugs (drugs that can kill or stop growth of bacteria)

- ✓ Oxytetracycline
  - 28 days before consumption of milk in cattle.
  - 5 days before consumption of poultry meat.

Self-Check -3	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Describe the potential consequences of failing to follow these procedures and Instructions (7points)

Note: Satisfactory rating - 7 points Unsatisfactory - below 3 points
You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____
Rating: _____

Name: _____ Date: _____

Short Answer Questions

Operation Sheet 1	Identify and use personal protective equipment's (PPE)

If necessary

Identify and use personal protective equipment's (PPE)

1. Identify different types of PPE to clean animal farm
2. List PPE used for clinical and laboratory activities
3. Clean the room by using PPE and dispose unnecessary materials.
4. Replace necessary materials to respective places (5s)
5. Send the completed documents to supervisor/ concerned body

Instruction Sheet	Learning Guide 08 #

This learning guide is developed to provide you the necessary information regarding the following **content coverage** and topics –

Follow emergency procedures

- Recognizing emergency or emergency alarm
- ***Communicating with*** Supervisor on OHS procedure.
- Following Instructions related to the emergency

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, **you will be able to –**

- Recognize emergency or emergency alarm
- ***Communicate with*** Supervisor on OHS procedure.
- Follow Instructions related to the emergency are followed according to organizational guideline.

Learning Instructions:

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below 3 to 6.
3. Read the information written in the information “Sheet 1, Sheet 2, Sheet 3 and Sheet 4”.
4. Accomplish the “Self-check 1, Self-check t 2, Self-check 3 and Self-check 4” in page -6, 9, 12 and 14 respectively.
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6. Do the “LAP test” in page – 16 (if you are ready).

Information Sheet- 1	**Recognizing emergency or emergency alarm**

1.1 Emergency: An unexpected and sudden event that must be dealt with urgently.

1.2 Emergency Alarm. An **alarm** which indicates that immediate danger to human life or to the animal and its machinery exists and that immediate action should be taken.

1.3 These are the different types of emergency alarms.

A. Fire Alarm

A **fire alarm system** has a number of devices working together to detect and warn people through visual and audio appliances when smoke, fire, carbon monoxide or other emergencies are present

These alarms may be activated automatically from smoke detectors, and heat detectors or may also be activated via manual fire alarm activation devices such as manual call points or pull stations.

There are many types of fire alarm systems each suited to different building types and applications.

1.3 Categories fire alarm system

- **Manual system (no automatic fire detectors so the building is fitted with call points and sounders).**

Manual systems, e.g. hand bells, gongs, etc. These may be purely manual or manual electric, the latter may have call points and sounders. They rely on the occupants of the building discovering the fire and acting to warn others by operating the system. Such systems form the basic requirement for places of employment with no sleeping risk.

- **Automatic systems intended for the protection of life.**

Automatic system is designed for the protection of life and which has automatic detectors installed throughout all areas of the building (including roof spaces and voids) with the aim of providing the earliest possible warning. Automatic system is likely to be appropriate for the majority of residential care premises. In practice, detectors should be placed in nearly all spaces and voids/holes.

- **Automatic systems intended for the protection of property.**

Detection should be provided in parts of the building where the risk of ignition is high and/or the contents are particularly valuable. Automatic systems provide fire detection in specified parts of the building where there is either high risk or where business disruption must be minimized.

A. Man Overboard Alarm:

A **man overboard** signal comprising of light and smoke can also be mounted in the bridge, attached by the side of the lifebuoy, which when thrown in water will emit smoke and light to draw the attention of ship's crew or other ship around the vicinity

B. **Abandon Ship Alarm**:

More than six short blasts and one prolonged blast on the **ship's** whistle and same signal on the general **alarm** bell is used as **abandon ship alarm** or sound signal onboard **ship**

C. Bridge Navigational Alarm.

Bridge Navigational Watch Alarm is to monitor bridge activity and detect operator disability which could lead to marine accidents.

D. Machinery Space Alarm:

Machinery spaces are all **machinery spaces** of category A and all other **spaces** containing propelling **machinery**, boilers and other fired processes, oil fuel units, steam and internal combustion engines, generators and major electrical **machinery**, oil filling stations, refrigerating, stabilizing, ventilation and air-

Machinery Spaces is a marine automation system for ship's engine room. ... If there is a malfunction in any **machinery**, an alarm will be sounded in the engine room as well as in the 'on duty' engineer's cabin.

E. Machinery Space CO2 Alarm:

The audible and visual **alarm** for the **CO2** fixed firefighting system is entirely different from machinery space **alarm** and other **ship alarm** signals for easy reorganization. The **alarm** should activate upon opening the release cabinet door which is used to open and release the **CO2** bottle banks.

Carbon dioxide (**CO2**) flooding **system**. A **fixed** installation designed to displace the oxygen in the protected space and thus extinguish the fire, usually used to fight fires in engine rooms, boiler rooms, pump rooms and holds. The **system** normally consists of a series of large **CO2** cylinders.

Self-Check -1	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. List emergency alarm and explain each of them? (6)

Note: Satisfactory rating - 6 points Unsatisfactory - below 6 points

You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

Information Sheet- 2	Communicating with Supervisor on OHS procedure

Communication

Communication is an active process in which information (including ideas, specifications, goals, feelings, work orders, and so on) is exchanged among two or more people.

Every communication involves (at least) one sender, a message and a recipient. This may sound simple, but communication is actually a very complex subject.

The transmission of the message from sender to recipient can be affected by a huge range of things. These include our emotions, the cultural situation, the medium used to communicate, and even our location.

2.1 purpose of communication

The purpose of communication is to get your message across to others clearly and unmistakably.

Communication is any verbal or non-verbal behavior which gives people an opportunity to send their thoughts and feelings, and to have these thoughts and feelings received by someone else.

2.2 A communication therefore has four parts:

- **The sender**: The sender 'encodes'

Encoding means the creation of messages (which you want to **communicate** with other person). On the other hand decoding means listener or audience of **encoded** message. So decoding means interpreting the meaning of the message. For **example** breakfast cereal companies want to convey their message to you to buy its product.

- **The message:**The message, usually in a mixture of words and non-verbal communication. It is transmitted in some way (for example, in speech or writing)
- **The recipient**: recipient 'decodes'

Decoding is done by the receiver when he gets the **message**. Receiver: the recipient of the **message** from the sender. He usually gives feedback to the sender in order to make sure that the **message** was properly received.

- **Feedback**

The final part of a communication is feedback: the recipient lets the sender know that they have received and understood the message.

2.3. Elements of Communication:

Seven major **elements of communication** process are:

(1) Sender
(2) Ideas
(3) Encoding
(4) **Communication** channel
(5) Receiver
(6) Decoding and
(7) Feedback.

2.4 Categories of Communication

The different categories of communication include:

A. Spoken or <u>Verbal Communication</u>: which includes face-to-face, telephone, radio or television and other media?

2.4.1 Advantages of Oral communication are:

- It brings quick feedback.
- In a face-to-face conversation, by reading facial expression and body language one can guess whether he/she should trust what's being said or not.
- Low cost method of spreading information

2.4.2. Disadvantage of oral communication

- Maintain the information for a short time.
- In face-to-face discussion, user is unable to deeply think about what he is delivering

B. <u>Non-Verbal Communication</u>, covering body language, gestures, how we dress or act, where we stand, and even our scent. There are many subtle ways that we communicate (perhaps even unintentionally) with others. For example, the tone of voice can give clues to mood or emotional state, whilst hand signals or gestures can add to a spoken message.

An advantage of written communication includes:

Messages can be edited and revised many time before it is actually sent. Written communication provides record for every message sent and can be saved for later study. A written message enables receiver to fully understand it and send appropriate feedback.

A disadvantage of written communication includes:

- Unlike oral communication, written communication doesn't bring instant feedback.
- It takes more time in composing a written message as compared to word-of-mouth.
- It is more accepted than oral communication, particularly if it has official stamp
- Low cost method of spreading information for a long time.

C. Nonverbal or <u>Written Communication</u>: which includes letters, e-mails, social media, books, magazines, the Internet and other media? Until recent times, a relatively small number of writers and publishers were very powerful when it came to communicating the written word. Today, we can all write and publish our idea online, which has led to an explosion of information and communication possibilities.

D. **Visualizations**: graphs and charts, maps, logos and other visualizations can all communicate messages.

2.5 Types of Communication Based on Purpose and Style

Based on style and purpose, there are two main categories of communication and they both bears their own characteristics.

Communication **types based** on style and purpose are:

1. Formal Communication
2. Informal Communication

1. Formal Communication

In formal communication, certain rules, conventions and principles are followed while communicating message.

Formal communication occurs in formal and official style. Usually professional settings, corporate meetings, conferences undergoes in formal pattern.

In formal communication, use of slang and foul language is avoided and correct pronunciation is required.

Types of formal communication.

- Memo or circular,
- Email from Departmental heads to subordinates.
- Organization intranet.
- Meeting.
- Teleconference.
- Direct circular.
- Face-to-face communication between or among staff.
- One-on-one or two-to-one communication.

2. **Informal Communication**.

The **Informal Communication** is the casual and unofficial form of **communication** wherein the information is exchanged spontaneously between two or more persons without conforming the prescribed official rules, processes, system, formalities and chain of command.

Thus, the **informal** or grapevine **communication** promotes social relationship among the participants. It helps to build up unity, integrity and solidarity among them and boosts up their morale. Grapevine or **informal communication** is faster than the formal **communication**.

An effective communicator understands their audience, chooses an appropriate communication channel, hones their message for this particular channel and encodes the message effectively to reduce misunderstanding by the recipient(s).

They will also seek out feedback from the recipient(s) to ensure that the message is understood and attempt to correct any misunderstanding or confusion as soon as possible.

Receivers can use techniques such as **Clarification** and **Reflection** as effective ways to ensure that the message sent has been understood correctly.

2.6 Communication tools

There are four basic communication tools:

- Listening
- Speaking
- Reading
- Writing

All four of these basic tools can be learned and improved. First, you must want to improve your communication skills. Next, you must understand them, and recognize their importance in the communication process. Then, you need to learn some new skills. Finally, you must practice good skills to become a better, more effective communicator.

2.7Questioning techniques

Questions can be divided into two main categories

- Closed questions
- Open questions

2.7.1 Closed Questions

Closed questions are used to find out quite particular information. They are questions which can be answered with a simple yes, no or one word. Such questions do not need a long and detailed response. They are very useful if you need to find out simple information or need to check specific details.

Examples of closed questions are:

- Is this where I can store the boxes?
- Can I use this tool?

- Is it lunch time?

2.7.2 Open Questions

Open questions are used to find out detailed information. These questions encourage the receiver to explain a longer answer. Open questions start with words like “What, When, Where, Why, and How”. They are used to open up a discussion or conversation. You cannot give one word answer to these questions.

Examples of open questions are:

- How should I sort this cabinet full of different paints?
- What training will I need to use this equipment?
- What did you mean when you asked me to check the supplies?

2.8 Communication Channels

There are multiple communication channels available to us today. These include face-to-face conversations, telephone calls, text messages, email, the Internet (including social media such as Facebook and Twitter), radio and TV, written letters, brochures and reports.

Choosing an appropriate communication channel is vital for effective communication. Each communication channel has different strengths and weaknesses.

2.9. Common Barriers to Effective Communication:

Communication barriers in the workplace can have a serious effect on the functioning and of an organization. In the following article we shall understand what some of these communication barriers are and how to overcome them.

2.9.1 What are the Communication Barriers in the Workplace?

If you don't know what communication barriers in the workplace are, how do you expect to overcome them? With an ends to the means kind of approach then, let's get into the details of this one. There are several barriers to effective communication and they work on several levels. Here are some of them that you should be looking into:

- **Emotional barriers and taboos**.

Some people may find it difficult to express their emotions and some topics may be completely 'off-limits' or taboo. Taboo or difficult topics may include, but are not limited

to, politics, religion, disabilities (mental and physical), sexuality and sex, racism and any opinion that may be seen as unpopular.

- **Lack of attention, interest, distractions, or irrelevance to the receiver.**
- **Differences in perception and viewpoint:**

No two people can perceive an event in the same way. What I infer from a particular incident, the other will not necessarily perceive the same. This can act as a major communication barrier because what I convey to a subordinate or colleague will be based on my perception and what he understands from it will be based on his. If the two viewpoints end up differing, it could cause the task at hand to suffer, as well as lead to misunderstandings.

- **Physical disabilities such as hearing problems or speech difficulties.**
- **Physical barriers:**

Sometimes barriers are very literal. Walls, doors and dividers do their jobs--they divide. And while people need these to have quiet time, private conversations and structure to a workspace, they can be a subtle hindrance to communication. If you think about it, people in open rooms tend to talk more and walk about more freely. Therefore, organizations interested in great communication consider how they configure employees' space.

- **Language Barriers**

Language can have its own special meaning. One develops jargon and other catch words that denote a completely different meaning than what the word signifies, to cite an example 'Going out' could mean the physical task of leaving a premise or in the colloquial sense it could mean a couple that is dating. Things like these are shared within groups who have common experiences and spaces. With this in mind, workplace communication can face major barriers when there are so many people with so many

languages and jargon, and a connotation meaning something different for each of them (possibly). So then the possibility of communication barriers gets heightened. That is why one needs to understand the importance of communication in business or the professional world. The best way to avoid miscommunication is to make use of words that are simple and which cannot be interpreted in very many ways.Language differences and the difficulty in understanding unfamiliar accents.

- **Cultural differences.**

The norms of social interaction vary greatly in different cultures, as do the way in which emotions are expressed. For example, the concept of personal space varies between cultures and between different social settings. See our page on Intercultural Awareness for more information.

2.10. How to lead discussion

A group discussion is a planned conversation between three to 10 people on a selected topic, with a trained discussion leader. The purpose is to express opinions and gain information on the topic and learn from the other group participants. Group discussion is an effective way to

- Share ideas and broaden viewpoints
- Stimulate interest in problems
- Help participants express their ideas
- Identify and explore a problem
- Create an informal atmosphere
- Get opinions from persons who hesitate /be slow to speak

2.10.1 Preparing for a Discussion

- Preparation is important to the success of any event. happen:
- The preferred seating arrangement is a circle, semicircle, U, or hollow square. All these formations allow everyone in the group to see one another.
- Make the room as comfortable as possible. Check the ventilation and lighting.
- Have paper and pencil ready to record main points.

- Start and end the discussion on time.
- Encourage informality and good humor. Permit friendly disagreement on the point under discussion, not among personalities.

1.10.2 Guidelines for a Discussion

If you participate in a discussion, the following guidelines will help you contribute effectively to the group:

- Be an active part of the group.
- Work to solve common problems.

- Discuss completely, but do not argue.
- Contribute ideas related to the subject of the discussion.
- Ask questions to clarify ideas.
- Be clear and brief.
- Listen and learn.
- Write down good ideas.

2.10 3 Leading a Discussion

If you lead a group discussion, the following guidelines will help you distinguish your role as the leader versus a participant:

- Help the group feel at ease. See that everyone knows everybody else.
- Give everyone a chance to talk. Let the person talking remain seated. More people will participate, and those talking will feel more at ease.
- Don't allow anyone to monopolize the discussion. Interrupt the "speech maker" tactfully, and lead the discussion to another person.
- Call on individuals who seem ready to talk rather than going around the circle.
- Be sure the discussion is of interest to all the participants.
- Keep the discussion on track. If it gets sidetracked, bring it back to the main subject by suggesting more important points that need to be covered in the time allotted.
- If you feel that some important point is being neglected, mention it.

- Summarize periodically. Stop occasionally to review the points that have been made.
- Stick to the time limit. If there isn't time to cover the subject sufficiently, mention this in your evaluation, and take action to correct this before the next group discussion.
- Keep spirits high. Encourage ease and informality. Let everyone have a good time. Don't let the discussion drag or become boring.
- Quickly summarize the conclusions in such a way that everyone will realize the important facts brought out in the discussion.

Self-Check -2	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

Name: _____ Date: _____

Directions: Answer all the questions listed below.

1. Define what communication means (1pt)
2. What are the two divisions of verbal communication (2pts)
3. Write ways of oral communication (3pts)
4. What is / are advantages of oral communication (1pt)
5. What are types of communication based on purpose and style (2pts)

Note: Satisfactory rating - 9 points Unsatisfactory - below 9 points

You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

Information Sheet- 3	Following Instructions related to the emergency

Emergency Response Instructions

Follow these Emergency Response Instructions to guide you during emergencies, such as fire, disaster, bomb threats, and medical emergencies.

These instructions are readily available in every department. Keep them in a visible location so they are accessible when needed.

- Remove anyone in the immediate area and close all doors as you leave.
- Use stairways, NOT elevators!
- If you hear a fire alarm, leave the building immediately.
- As you leave, close the doors and windows behind you.
- If there is smoke or heat, stay low. Crawl to the nearest exit if need be.
- If your nearest exit is blocked by fire, smoke, or heat, go to an alternate exit.
- If heavy smoke is present, close the door and stay in the room.
- If the door is not hot, open it cautiously. Stand behind the door and be prepared to close it quickly if there is excessive smoke.
- If you are trapped:
- Place a blanket or similar article along the bottom of the door to keep smoke out.
- Cover your nose and mouth with a wet cloth.
- Hang an item out the window to attract attention of rescue teams.
- Do NOT jump!
- Do NOT break open windows!

If you must move through flames – hold your breath, move quickly, covering your head and hair. Keep your head down and close your eyes as much as possible.

If your clothes catch fire “stop, drop, and roll” until the fire is out.

Conduct a final search of the building if it is safe to do so.

Leave the area by the nearest stairway that is clear of smoke.

Assemble outside in a pre-designated area.

Do not re-enter the building until notified to do so by the Fire Department.

Follow the procedures in place to account for all employees after evacuating.

Self-Check-3	**Written Test**

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. List 6 instruction for emergency situation?

Note: Satisfactory rating – 6 points Unsatisfactory - below 6 points

You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____

Rating:

_____

Name: _____ Date: _____

Short Answer Questions

Instruction Sheet	Learning Guide 09 #

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics –

- Recording and documenting Hazards and other incidents.
- Reporting or informing work place hazards to appropriate persons.

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –

- Record and document Hazards and other incidents in standard organization formats
- Report or inform work place hazards to appropriate persons when hazards arise

Learning Instructions:

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below 3 to 6.
3. Read the information written in the information “Sheet 1, Sheet 2, Sheet 3 and Sheet 4”.
4. Accomplish the “Self-check 1, Self-check t 2, Self-check 3 and Self-check 4” in page -6, 9, 12 and 14 respectively.
5. If you earned a satisfactory evaluation from the “Self-check” proceed to “Operation Sheet 1, Operation Sheet 2 and Operation Sheet 3 ” in page -15.
6. Do the “LAP test” in page – 16 (if you are ready).

Information Sheet- 4	Recording and documenting Hazards and other incidents.

Working in an unsafe practice at any time. However, if the nature of your work makes it unavoidable, take measures to ensure that others are aware of your location and have someone check in with you from time to time, either in person or by telephone. Before conducting any work alone in a laboratory or anywhere else in your working area go through this checklist to determine and monitor if it is appropriate to proceed:

- Is your supervisor aware of your plans?
- Are there any hazardous experiments involved?

  Examples:

  - ✓ High temperature
  - ✓ High vacuum
  - ✓ Extremely flammable materials (low flash point)
  - ✓ Poisonous materials
  - ✓ Scaling up i.e., higher quantities
- Have you reviewed your procedure with your supervisor?
- Do you have a written operating procedure?
- Are your apparatus and equipment in good working condition?
- Are you trained to carry out the work?
- Do you have a check-in/check-out procedure?
- Do you have an emergency contingency?
- Do you have access to a telephone (rather than a cell) in case of an emergency?
- Does your door have a viewing window or other means of indicating someone is inside?
- Are you aware of the emergency evacuations procedure?
- Do you have access to a telephone in case of an emergency?

Hazard report form

1. Name of the person who reported the hazard:

. . . . . .
. . ……

2. Details of the hazard reported:

. . . . . .
. .
……..……
……

. . . . . .
. . ……

. . . . . .

3. Who the hazard was reported to:

. . . . . .
. . ……..

4. How the hazard was controlled:

. . . . . .
. . ……..

. . . . . .
. . ……..

. . . . . .

Self-Check 1	Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

Directions: Answer all the questions listed below.

1. Write ways of reporting hazards (3pts)
2. Why it's important reporting and documenting work place hazards? (6points)

Note: Satisfactory rating - 9 points Unsatisfactory - below 9 points

You can ask you teacher for the copy of the correct answers.

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Questions

List of Reference Materials

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7. Environmental Protection Act 1990

8. Hazardous Waste Regulations 2005 (as amended).