Horticultural Crops Production

Level I

Learning Guide# 37

Unit of Competence: -Perform Landscape Work

Module Title:-Performing Landscape Work

LG Code: AGR HCP1 M10 LO1-LG 37

TTLM Code: AGR HCP1 TTLM 1219v1

LO1: Prepare materials, tools and equipment for landscaping work

Instruction Sheet	Learning Guide #37

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

- Identifying landscaping tools and equipment
- Checking materials tools and equipment condition
- Loading, unloading of materials
- personal protective equipment (PPE)
- Identifying and reporting OHS hazard

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 the required materials, tools and equipments.
- Conduct checks on all materials, tools and equipments with insufficient or faulty.
- Techniques used when loading and unloading materials demonstrate correct manual handling, and minimize damage to the load and the vehicle.
- Select and check suitable personal protective equipment prior to use.
- Provide landscaping support to OHS requirements according to workplace information.
- Identify and report OHS hazards

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 to Sheet 5”.
4. Accomplish the “Self-check 1, Self-check t 2, Self-check 3 ,Self-check 4 and Self check 5” **in page -11, 15, 18, 21 and 23** respectively.
5. If you earned a satisfactory evaluation from the “Self-check” proceed to “Operation Sheet 1 in page 24.
6. Do the “LAP test” **in page – 24** (if you are ready).

Information Sheet-1	Identifying landscaping tools and equipment

1.1 Concepts of Landscape

Landscape is architects design buildings to provide useful and attractive indoor spaces. The job of landscape architects, on the other hand, is to create useful and attractive outdoor environments. They use natural elements, such as land, trees, and shrubs, to create attractive settings for buildings, highways, and parks. Landscape architecture is a multi-disciplinary field, incorporating aspects of: botany, horticulture, the fine arts, architecture, industrial design, geology and the earth sciences, environmental psychology, geography, and ecology. The activities of a landscape architect can range from the creation of public parks and parkways to site planning for campuses and corporate office parks, from the design of residential estates to the design of civil infrastructure and the management of large wilderness areas or reclamation of degraded landscapes such as mines or landfills.

1.2 Objectives of landscape: -

- To protect the conservation values of the recommended areas.
- To protect natural environmental processes, maintain biodiversity and protect natural resources of soil, water, flora and fauna.
- To protect habitat for fauna.
- To protect geological formations and landscape values.
- To protect significant vegetation, protect wetland habitat for fauna, and protect geologically significant features.
- To give recreation gets ascetic value.
- It is businesses (about 26% are self-employed)

1.3 Impact of Landscape Work:

- improving the microclimate (e.g. by providing shelter and shade)
- improving views
- creating spatial containment
- helping to combat global warming
- producing fruit
- creating habitats for wildlife and increasing biodiversity
- producing firewood for local residents (eg from coppice trees)
- managing surface water

1.4 Tools and equipments required for landscaping work

Tools and equipment may include leveling equipment, wheelbarrow, concrete mixer, string lines, tape measures, marking gauges, spades, shovels, crow bars, chisels, hammers, spanners, nails, handsaws, sanding blocks, paint brushes, trowels and spreading equipment, hammers, spanners, metal files, and hacksaws.

Leveling equipment is an optical instrument used to establish or check points in the same horizontal plane. It is used in surveying and building to transfer, measure, or set horizontal levels.

Fig.1.1 leveling equipments

Wheelbarrow A one- or two-wheeled vehicle with handles at the rear, used to convey small loads.

Fig.1.2 Wheelbarrow

A concrete mixer (also commonly called a cement mixer) is a device that homogeneously combines cement, aggregate such as sand or gravel, and water to form concrete.

A typical concrete mixer uses a revolving drum to mix the components. For smaller volume works portable concrete mixers are often used so that the concrete can be made at the construction site, giving the workers ample time to use the concrete before it hardens. An alternative to a machine is mixing concrete or cement by hand. This is usually done in a wheelbarrow; however, several companies have recently begun to sell modified tarps for this purpose.

Fig.1.3 concrete Mixer

Crowbar (tool) is a tool consisting of a metal bar with a single curved end and flattened points, often with a small fissure on one or both ends for removing nails. "Crowbar" may occasionally be used loosely for this tool, but is more commonly used to mean a larger straight tool.

Fig.1.4 crowbar

A tape measure or measuring tape is a flexible form of ruler. It consists of a ribbon of cloth, plastic, fiber glass, or metal strip with linear-measurement markings.

It is a common measuring tool. Its flexibility allows for a measure of great length to be easily carried in pocket or toolkit and permits one to measure around curves or corners.

Fig. 1.5 meter

Marking gauge A marking gauge, also known as a scratch gauge, is used in woodworking and metalworking to mark out lines for cutting or other operations.

The purpose of the gauge is to scribe a line parallel to a reference edge or surface. It is used in joinery and sheet metal operations. The gauge consists of a beam, a headstock, and a scribing or marking implement, typically a pin, knife, pen or wheel.

The headstock slides along the beam, and is locked in place by various means: a locking screw, cam lever, or a wedge.

The marking implement is fixed to one end of the beam.

Fig.1.6 marking gauge

A spade: - is a tool designed primarily for the purpose of digging or removing earth. Early spades were made of raven wood. After the art of metalworking was discovered, spades were made with sharper tips of metal. Before the advent of metal spades manual labor was less efficient at moving earth, with picks being required to break up the soil in addition to a spade for moving the dirt. With a metal tip, a spade can both break and move the earth in most situations, increasing efficiency.

Fig.1.7 spade

A shovel is a tool for digging, lifting, and moving bulk materials, such as soil, coal, gravel, snow, sand, or ore. Shovels are extremely common tools that are used extensively in agriculture, construction, and gardening.

Fig.1.8. shovel

A chisel is a tool with a characteristically shaped cutting edge (such that wood chisels have lent part of their name to a particular grind) of blade on its end, for carving or cutting a hard material such as wood, stone, or metal.

The handle and blade of some in use, the chisel is forced into the material to cut it. The driving force may be manually applied or applied using a mallet or hammer.

In industrial use, a hydraulic ram or falling weight ('trip hammer') drives the chisel into the material to be cut.

Fig. 1.9 chisel

A hammer is a tool meant to deliver an impact to an object. The most common uses are for driving nails, fitting parts, forging metal and breaking up objects. Hammers are often designed for a specific purpose, and vary widely in their shape and structure.

The usual features are a handle and a head, with most of the weight in the head. The basic design is hand-operated, but there are also many mechanically operated models for heavier uses, such as steam hammers.

Fig.1.10 hammer

Hand saw In woodworking and carpentry, hand saws, also known as "panel saws", "fish saws", are used to cut pieces of wood into different shapes. This is usually done in order to join the pieces together and create a wooden object. They usually operate by having a series of sharp points of some substance that is harder than the wood being cut. The hand saw is a bit like a tenon saw, but with one flat, sharp edge.

Fig. 1.11 hand saw

A trowel is one of several similar hand tools used for digging, smoothing, or otherwise moving around small amounts of viscous or particulate material.

In gardening, a trowel is a tool with a pointed, scoop-shaped metal blade and a handle. It is used for breaking up earth, digging small holes, especially for planting and weeding, mixing in fertilizer or other additives, and transferring plants to pots.

Fig.1.12 trowel

Paint brushes is a tool with bristles, wire or other filaments, used for cleaning, grooming hair, makeup, painting, surface finishing and for many other purposes. It generally consists of a handle or block to which the filaments are affixed either parallel or perpendicular, depending on the way the brush is to be gripped during use.

The material of both the block and bristles or filaments is also chosen to withstand hazards of its application, such as corrosive chemicals, heat or abrasion.

Fig. 1.13 paint brusher

A sanding block is a block used to hold sandpaper. In its simplest form, it is a block of wood or cork with one smooth flat side. The user wraps the sandpaper around the block, and holds it in place (by inserting a fitted piece of cardboard under the sandpaper, one can soften the impact on the wood and protect against tears or uneven wear on the sandpaper). Sanding blocks are helpful because they prevent the “waves” created by plain sandpaper.

Fig.1.14 sanding block (sandpaper)

Some advanced tools and equipment for landscaping are:



- Riding mowers
- Skid steer loaders
- Bed edging materials
- Water features
- All types of herbicides, insecticides, fungicides, fertilizers and pesticides
- Snow and ice removing tools

Self-Check -1	Written Test

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. What is landscape? 4 points
2. Describe the impacts of landscape. 3 points
3. List the materials and equipments used during landscape work. 6 points

Note: Satisfactory rating – 13 points Unsatisfactory – below 13 points

You can ask your teacher for the copy of your answer

Score = _____

Rating= _____

Name: _____ Date: _____

Answer sheet

Information Sheet-2	Checking materials tools and equipment condition

As mentioned above different materials, tools and equipments are necessary to accomplish the landscape work properly. Checking the accessibility of the materials, their compatibility and their use is vital. This is because sometimes unnecessary tools, materials and equipment are prepared; this situation may hinder the progress of the work activities. Furthermore, the access of materials, particularly related with the land and planting materials also should be checked by preparing check list. This checking, whether the tools and materials are available or not helps the workers to start their work.

Checks are conducted on all materials, tools and equipment with insufficient or faulty items reported to the supervisor.

Landscape experts must ensure that their equipment is used and maintained correctly to reduce the risk of accidents or damage to health and to meet health and safety requirements.

Employers are legally required to ensure that all equipment supplied and used for work purposes is safe and does not pose a long-term hazard or risk to employee health. This doesn't just mean equipment used in manufacturing, agriculture, construction, forestry or quarries – the rules apply equally to other workplaces, from offices, shops and hotels to engineering or car repair services.

As the business grows and you get more clients and more assignment, you can get more tools and equipment and offer more services.

Employers are also required to ensure that those using equipment have sufficient knowledge and training to use it safely.

There are various options when starting a landscaping business, you can buy the equipment, rent it or get it on lease.

However, one mistake that beginning entrepreneurs make is that they buy or rent too much equipment which topples their financial condition and makes them suffer losses in the business. According to experts, your landscaping equipment should be busy and billable 30-50 percent of the time and only then it can get you good returns on investment.

The best thing to do when buying equipment and tools for your landscaping business is to consider their utility on long term basis and you should be able to use them at least 50% of the year or more in order to make profits.

You can also decide to buy the equipment once you have secured a number of landscaping contracts to make sure you will not suffer a loss. It is best to prepare a financial plan and calculate how much revenue you will need to buy the tools and equipment and get only those which are needed and that will bring the payback in a short time. Getting the required and needed tools and equipment for landscaping business can help to establish and run a thriving venture if you are prepared to deal with all kind of job assignments.

A maintenance schedule should be in place to ensure that your equipment is maintained at least at intervals indicated in the manufacturer's operating instructions or more frequently if indicated by the risk assessment. Any daily checks should be undertaken as recommended by the manufacturer. This will help prevent problems such as blockages, leaks or breakdowns, which can increase risks.

Anyone who uses a hand-held tool may be at risk of injury, either accidentally, through misuse or through equipment failure. Hand-arm vibration is caused by the use of hand-operated power tools. Employees who regularly use these as part of their job could suffer permanent injury known as hand-arm vibration syndrome (HAVS). This can cause severe pain and permanent loss of feeling in the fingers and hands.

There are many hazards involved in the use of workplace equipment. For example:

- cutting equipment could cause trapping or amputation of limbs if there are insufficient safeguards
- a forklift truck could roll over, causing crush injuries
- equipment that uses heat, such as ovens, grills and welding equipment, could cause injuries ranging from minor scalding to disfigurement and serious burns
- equipment that emits very bright light, such as lasers or sources of ultraviolet light, could cause damage to skin or eyes
- equipment that transmits vibrations into the hand or arm (HAV), or whole body (WBV), such as grinding equipment or tractors, could cause long-term illness or disability
- equipment where people have to work in confined spaces, such as a storage tank, where the space is at risk from developing an unbreathable atmosphere and/or filling up quickly with noxious fumes or other substances

When you're buying new equipment it's worth considering:

- whether there are any dangerous parts and if so whether any guards are supplied with the equipment
- how any emergency-stop buttons work
- whether the environment in which you plan to operate the machinery is suitable for the levels of dust, fumes, noise or vibration it may cause
- whether there are clear instructions and manuals for installation and maintenance

You must make sure that equipment:

- is safe to use
- is complete
- is provided with clear instructions

- carries Common Era (CE) marking and has a declaration of conformity, which shows that key health and safety standards have been met
- produces the least possible vibration in doing the work required – information on vibration levels should be contained in the manufacturer's instruction documentation

Self-Check -2	Written Test

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. Describe the importance of conducting checks on all materials, tools and equipment? 6 points
2. What do you observe when buying equipment and tools for your landscaping work? 4 points

Note: Satisfactory rating – 10 points **Unsatisfactory – below 10 points**

You can ask your teacher for the copy of your answer

Score = _____

Rating= _____

Name: _____ Date: _____

Answer sheet

Information Sheet-3	Loading, unloading of materials

During landscape work loading and unloading are the main component of the operation. Based on the potential of the industry, these activities may be occurring in two ways, this means manual loading unloading and mechanical loading unloading. This part of the work operation needs great care and minimize damage to the load and the vehicle. During loading and unloading of tools which are necessary for landscape operation should be arranged properly to use the tools without any distortion and personal hazards.

Techniques used when loading and unloading materials demonstrate correct manual handling, and minimize damage to the load and the vehicle.

You have probably witnessed something falling off a truck. May be you have a piece of gravel fly off an untapped dump truck and crack your windshield. Maybe you have seen a large balled-and-bur lapped (B&B) tree roll off a flatbed as it turned the corner.

These examples illustrate the most common problems in hauling landscape materials: proper loading and securing.

However, even a properly loaded and secured truck can be damaged, or cause damage, if it is overweight. And dumping on unstable ground can cause tipping accidents. Each and every step in the hauling process--loading, securing, and covering, transporting, unloading and returning to the yard--poses some risk. Landscape professionals in charge of transporting materials and equipment need to understand these risks.

Mixed bag the landscape industry is amazing in the diversity of materials it uses. The types of products landscaping crews haul can run the gamut, from dirt and compost to plants, water, wood, salt and pavers. Additionally, the unique range of products one landscape company might haul can be quite different from another company's loads.

A firm specializing in landscape construction might haul bricks, stone, timbers, sand and soil.

A company that performs mostly landscape maintenance might haul only grass clippings and leaves--yet that same company might then compost green waste and haul it out again as a product. The array of landscape materials, and the need for their transport, goes on and on. Each material has its own set of loading and handling demands; concrete-wall-system stones require much different treatment than clippings.

In general, you can divide materials into three categories: bulk, bagged and palletized. Bulk materials include mulch, dirt, aggregates such as sand and gravel, clippings, leaves, snow, construction debris and B&B plants. Bagged commodities include grass seed, fertilizers, pesticides, soil, compost and aggregates. Palletized materials include sod, bagged materials, concrete-wall-system stones, pavers, lumber, timbers, fencing and other landscape items.

Loading up when loading bulk shipments, one of the toughest problems is gauging the weight of the load. When estimating the total weight of a shipment, you must carefully consider the moisture content of bulk materials. The total weight of a yard of mulch, soil and sand can increase up to 30 percent with added moisture. Large moisture content can wreak havoc on hauling operations.

Self-Check 3	Written Test

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. What are the advantages of necessarily (properly) loading and unloading of materials and equipments during landscape work? 6 points
2. List the two method/ways of loading and unloading of materials and equipments during landscape work. 6 points

Note: Satisfactory rating – 12 points **Unsatisfactory – below 12 points**

You can ask your teacher for the copy of your answer

Score = _____

Rating= _____

Name: _____ Date: _____

Answer sheet

Information Sheet-4	Personal Protective Equipment (PPE)

Personal protective equipments (PPE) is defined in the Regulations as 'all equipment (including clothing affording protection against the weather) which is intended to be worn or held by a person at work and which protects him against one or more risks to his health or safety.

Suitable personal protective equipment (PPE) is selected and checked prior to use.

During PPE uses required regulation are:

- is properly assessed before use to ensure it is suitable;
- is maintained and stored properly;
- is provided with instructions on how to use it safely; and
- is used correctly by employees.

To allow the right type of PPE to be chosen, carefully consider the different hazards in the workplace. This will enable you to assess which types of PPE are suitable to protect against the hazard and for the job to be done.

Consider the following when assessing whether PPE is suitable:

- Is it appropriate for the risks involved and the conditions at the place where Exposure to the risk may occur?
- Can it be adjusted to fit the wearer correctly?
- Has the state of health of those who will be wearing it been taken into account
- What are the needs of the job and the demands it places on the wearer?
- If more than one item of PPE is being worn, are they compatible?

Personal protective equipment (PPE) used during landscape work may include steel capped boots/shoes, overalls, gloves, sun hat, sunscreen lotion, safety goggles, face mask and ear protectors.

List of personal protective equipments with their function

						
Boots	**Overalls& Spray Suit**	**Gloves**	**Dust Mask**	**Face Shield**	**Goggles**	**Respirator**
Protect your feet from spray drift and spillages	Protects our body and clothes	Protect your hands	Protects your mouth and nose from dust	Protects your whole face from splashes	Protects your eyes from splashes and spray drift	Protects your mouth, nose and lungs from fumes

Self-Check -4	Written Test

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. What is personal protective equipment (PPE)? 4 points
2. Describe the regulation required during PPE use. 3 points
3. Discuss the considerations during assessing of PPE. 5 points
4. List with their function PPE used during landscape work. 8 points

Note: Satisfactory rating – 20 points Unsatisfactory – below 20 points

You can ask your teacher for the copy of your answer

Score = _____

Rating= _____

Name: _____ Date: _____

Answer sheet

Information Sheet-5	Identifying and reporting OHS hazard

What is occupational health and safety?

Occupational health and safety is a discipline with a broad scope involving many specialized fields. In its broadest sense, it should aim at:

- the prevention among workers of adverse effects on health caused by their working conditions;
- the protection of workers in their employment from risks resulting from factors adverse to health;
- the placing and maintenance of workers in an occupational environment adapted to physical and mental needs;
- The adaptation of work to humans.

In other words, occupational health and safety encompasses the social, mental and physical well-being of workers that is the “whole person”.

During the operation of landscaping work we use manual and machinery tools. We have to consider the presence of hazards that may occur because of misuse of the tools, chemicals and naturally. OHS hazards associated with landscape work may include solar radiation, dust, noise, air and soil-borne microorganisms, chemicals and hazardous substances, sharp hand tools and equipment, manual handling, holes, trenches, slippery and uneven surfaces, electricity and overhead hazards including power lines. If the above mentioned occupational health hazards occurred, it should be reported to the concerned bodies and better to take immediate remedy to alleviate the problems.

Types of workplace hazards include:

- Safety hazards: - e.g., inadequate machine guards, unsafe workplace conditions, unsafe work practices.
- Biological hazard: - caused by organisms such as viruses, bacteria, fungi and parasites.
- Chemical hazard:- caused by a solid, liquid, vapors, gas, dust, fume or mist.
- Ergonomic hazards:- caused by anatomical, physiological, and psychological demands on the worker
- Physical hazards:- caused by noise, vibration, energy, weather, heat, cold, electricity, radiation and pressure.

Self-Check -5	Written Test

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. What is occupational health and safety? 3 points
2. List the hazards that may associate with landscape work. 5 points
3. Discuss the types of hazards. 7 points

Note: Satisfactory rating – 15 points **Unsatisfactory – below 15 points**

You can ask your teacher for the copy of your answer

Score = _____

Rating= _____

Name: _____ Date: _____

Answer sheet

Operation Sheet 1	Identify regulations required during using personal protective during work

Regulations required during using personal equipment (PPE) are:-

1. properly asses before use to ensure it is suitable
2. Maintain and store properly.
3. Provide with instructions on how to use it safely.
4. Use correctly.

LAP Test	Practical Demonstration

Name: _____ Date: _____

Time started: _____ Time finished: _____

Instruction: Given necessary templates, tools and materials you are required to perform the following tasks within 2 hours.

Task 1. Considering regulation required during using of Personal Protective Equipment (PPE), wear (Personal Protective Equipment) PPE properly

List of reference Materials

1. http://www.mwtrain.com.au/Support-Landscape-Work-book
2. http://www.vu.edu.au/units/rtc1202a
3. https://help.landscape.canonical.com/FAQ

Horticultural Crops Production

Level I

Learning Guide# 38

Unit of Competence: -Perform Landscape Work

Module Title:-Performing Landscape Work

LG Code: AGR HCP1 M10 LO2-LG- 38

TTLM Code: AGR HCP1 TTLM 1219v1

LO2: Undertake landscape work as directed

Instruction Sheet	Learning Guide #38

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

- following Instructions and directions provided by supervisor
- undertake Landscape work
- undertaking Interactions with other staff and customers
- waste materials disposal procedures and policy
- reporting Problems or difficulties

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 and clarification sight instructions and directions provided by supervisor.
- Undertake landscape work in a safe and environmentally appropriate manner.
- Carry out instructions with other staff and customers in positive and professional manner.
- Observe workplace practices, handling and disposal of materials
- Report problems or difficulties in completing work to required standards or timelines.

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below 3 to 5.
3. Read the information written in the information “Sheet 1 to Sheet 5”.
4. Accomplish the “Self-check 1, Self-check t 2, Self-check 3 ,Self-check 4 and Self check 5” **in page -28, 34, 36, 38 and 41** respectively.
5. If you earned a satisfactory evaluation from the “Self-check” proceed to “Operation Sheet 1 and Operation Sheet 2 in page 42.
6. Do the “LAP test” **in page – 42** (if you are ready).

Information Sheet-1	Following Instructions and directions provided by supervisor

The workers of landscape formerly understand the basic instructions and steps in deciding what goes with what and where. Without understanding instruction and directions of landscape work it is impossible to operate the work properly because, instructions and directions are the indicators of the operation system. Landscape design is always grounded in a clear understanding of what the specific desires are, because each site has its own unique opportunities and constraints.

More than 26 percent of landscape architects are self-employed. Instructions and directions provided by supervisor are followed, and clarification sought when necessary. Undertaking landscape assessments including environmental and visual impact assessments to prepare policies or inform new developments.

What instructions may be relevant to this standard?

Instructions may include standard operating procedures (SOPs), enterprise policy and procedures, specifications, work notes, Material Safety Data Sheets (MSDSs), manufacturer's instructions, or verbal directions from the manager or supervisor.

Ornamental plants, shrubs, hedges, trees, flowers, grass and horticultural knowledge are the ability to identify and cultivate a broad range of relevant plant material and the best uses for those plants. Having a working knowledge of this plant material is essential because not all plants thrive in similar growing conditions. Developing healthy and proper soil for a given planting also is key to their vitality. After these conditions are met, adequately maintaining your plantings and overall landscape ensures that it will continue to thrive.

Good landscaping can often increase by 10 or 15 percent **the price you can get when you sell the property.** Within a design or plan, attention will be paid to the following aspects:

the maturation of the plants installed, texture and color schemes, non-plant features (stonework such as walks, walls, terraces, sculpture, fencing, and trellises), current and future use, maintenance needs, and the time and expense to bring it all together.

In addition to the aspects that make the finished landscape, others must first be considered. These include: the existing grade and topography, existing and possible future buildings and structures, septic location, climate patterns, soil conditions. By discussing these various elements along with the client's desires, Instructions and directions can be developed a landscape that will be sustainable and appealing for many years to come.

Grounds by design fine landscapes. Landscape expertise to include: design, installation, maintenance, consulting, and photography services. Among the general projects that we can provide are: wildflower meadow establishment, stonework installation, rock gardens, planting bed establishment, woodland and formal plantings, lawn and lawn alternative installation, landscape restoration and maintenance, and landscape consulting. Landscape instructions provide photography for personal and professional purposes, horticultural writing, and workshops on horticultural practices.

Self-Check -1	Written Test

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. Discuss the instructions relevant to landscape work. 5 points
2. What are the various elements for landscape works? 9 points

Note: Satisfactory rating – 14 points **Unsatisfactory – below 14 points**

You can ask your teacher for the copy of your answer

Score = _____

Rating= _____

Name: _____ Date: _____

Answer sheet

Information Sheet-2	Undertake Landscape work

Landscape work is undertaken in a safe and environmentally appropriate manner according to enterprise guidelines and OHS requirements. It's better to deal with health and safety issues before they become a problem - planned approach to safety is essential for your business. Safety shouldn't be seen as an additional cost – it is a necessary and essential component of your business.

Landscape Architects conduct research and advice on planning, design and stewardship of the outdoor environment and spaces, both within and beyond the built environment, and its conservation and sustainability of development. For the profession of landscape architect, a degree in landscape architecture is required.

The process of undertaking landscape work best begins with a walk-around at the site. At this time, in addition to viewing the property for the projects to be done, many aspects are discussed. These include: current and expected uses of the site; ideal desired changes; plants that the client enjoys and might be installed; any landscape such as walkways, terraces, or walls; viewing perspectives from inside the home and other on-site buildings and structures; general and detailed functional requirements of the landscape; capability of the client to maintain the landscape; possible client hands-on role in the project; and possible costs to enact the changes and maintain them.

At this time the client and architects develop an initial action plan which can include: an early cost estimate, project scheduling, time frame for completion, and the basics of what the project will entail. During the project, architects regularly connect with the client so that they are kept aware of progress. It is expectation that the client appreciates this connection and will communicate concerns and thoughts of their own as well. Architects avail via cell phone and email.

The workers of landscape formerly understand the basic instructions and steps in deciding what goes with what and where. Without understanding instruction and directions of landscape work it is impossible to operate the work properly because, instructions and directions are the indicators of the operation system. Landscape design is always grounded in a clear understanding of what the specific desires are, because each site has its own unique opportunities and constraints.

Underpinning Skills: skills include the ability to:

- Prepare materials, tools and equipment for landscaping work.
- Undertake landscape work as directed.
- Handle materials and equipment.
- Clean up on completion of landscaping work.

Resources Implication: The following resources must be provided.

- Access is required to real or appropriately simulated situations, including work areas, materials and equipment,
- Documentation and information on workplace practices and OHS practices.
- specifications and work instructions
- Approved assessment tools
- Certified assessor /Assessor's panel

Repair and maintenance of landscape features

The term "landscaping maintenance" can lead one to believe it includes a number of different services, but is a fairly vague term.

Landscaping Maintenance and repair work for any landscaped area will maintain the look and design and save expensive replacement costs. Hardscape and Soft cape are the 2 elements used in landscaping and together form a landscape design.

Hardscape refers to the structure of the landscape design, such as retaining walls, paved areas, driveways, stairs, irrigation, drainage, walkways and features like ponds, statues, stones and rocks. Soft cape refers to everything else, such as soils, lawns, plants, flowers and mulches.

Landscaping maintenance services include

- **Mowing:** With this landscaping maintenance service, we will mow your grass as needed seasonally. We will also trim and edge any sidewalks and obstacles and blow clippings from hard surfaces.
- **Fertilizing:** We will fertilize your lawn as requested to keep it looking its best. We can also perform any spot treatments if necessary to promote proper lawn growth.
- **Weed Care:** As part of our landscaping maintenance services, we will help minimize and control weeds in your landscaping by hand weeding and applying weed control treatments to your flower and plant beds.
- **Mulching:** With our mulching services, we will spread mulch in all of your beds and around your trees as needed for aesthetic appeal and weed control.
- **Trimming and Pruning:** With this service, we will trim and prune any shrubs, plants, and ornamental grasses to ensure good shape and plant health.
- **Irrigation Maintenance:** We will inspect your irrigation system monthly while the system is on to ensure proper coverage and function.
- **Lawn Aeration:** Aeration is an important landscaping maintenance service that will reduce soil compaction and allow fertilizers to beautify your turf.
- **Over-Seeding:** We can perform over-seeding services following aeration in order to ensure a healthy and full lawn.
- **Leaf Removal:** We will remove fallen leaves from both your landscaping beds and turf areas.
- **Spring and Fall Annual Planting:** We can plant a variety of annual flowers and plants throughout your landscape to provide color and design in any season.

- **Preparation of Annual Beds:** This service prepares beds for planting by cultivating the soil and adding necessary amendments to the soil to help with the annuals growth.
- **Removal of Annuals:** This landscaping maintenance service includes removing any dead annuals after the growing season has ended.
- **Tree and Shrub Care:** We will apply a number of treatments to your trees and shrubs in order to ensure health and prevent disease or insects.

Repairing your existing landscape, whether it be relieving your interlock, rebuilding your garden wall or restoring your stairs to safe and function aligning, we're ready to do it for you. Extending the life of your interlock, through repairs and maintenance, gives you better value for money on your initial landscaping investment. With repairs, maintenance and even carrying out improvements to your interlock costing much less than a new installation and it's great value as well.

Usually landscape repairs fall into a few categories such as complete rebuild, partial rebuild or improvements to existing. Some examples are listed below.

Partial repairs

- Tire ruts or pot holes in an interlock driveway
- Interlock in front of the garage or along the sidewalk.
- Hazardous stairs
- Sunken interlock
- Interlock around a pool
- Correcting slopes and drainage
- Leaning garden walls

Improvements and enhancements:

- Edge restrainers around border of interlock
- Power washing and polymeric sand installation
- Adding accent borders
- Removing overgrown shrubs and bushes which could be contributing to walls leaning over
- Incorporating new bricks to increase square footage of interlock patios or walkways
- Re-designing stairs and interlock layout
- Adding curbing around existing gardens
- Replacing crumbled/corroded old stairs with new man made products or natural stone stairs

Fig.2.1 Landscape repair and maintenance

Self-Check -2	Written Test

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. What are the conditions that workers of landscape formerly understand before undertake landscape work? 6 points
2. Discuss 'Resources Implication' in landscape work? 4 points
3. Discuss repair and maintenance of landscape features. 5 points

Note: Satisfactory rating – 15 points Unsatisfactory – below 15 points

You can ask your teacher for the copy of your answer

Score = _____

Rating= _____

Name: _____ Date: _____

Answer sheet

Information Sheet-3	Undertaking Interactions with other staff and customers

Interaction is very important to understand the overall activities of conservation works with other staffs. The interaction may create some impression between the workers and other staffs about the significance of landscape work, way of landscaping process, advantages of landscape work and environmental importance. In addition to these the interaction also develops positive relationship among the industry, staff and customers in order to protect the landscape from different damaging agents.

Interactions with other staff and customers are carried out in a positive and professional manner. Landscape architects work on small residential projects as well as large public ones. For example, landscape architects might be asked to design a pond on a private estate.

They might also design a public park. Some landscape architects work on industrial projects. They might design an attractive surrounding for a factory. They work on highways and freeways as well. There is a great deal of diversity in their profession.

Remember that safe interactions little or no claims cost, but also in a good reputation. Your name is on your hand. Having something negative interactions makes bad public relations. Think of all the advertising money you spend, and then think of the number of people who might directly witness landscape demonstration. Think of the employees who could be diligent.

- Using multiple lenses and methods to measure other staff and customers satisfaction ensures that your measurement is accurate and complete. Too often customer satisfaction is reduced to a simple equation that compares customer expectations to customer perceptions.
- Even if you are committed to measuring current customer perceptions using surveys, you may want to consider complementing your approach with other techniques (Academic Roundtable).
- Experience auditing is a specialized and rigorous form of mystery shopping that involves the use of personas, scenarios and objectives to document and measure the variety of communication cues exchanged between staff and customers.
- Monitoring can be directed personal observation or at phone and may also be referred to as quality monitoring or performance evaluation.

Employer Duties

- Keep the workplace free from hazards
- Inform employees of how to protect themselves against hazards that cannot be controlled
- Conduct regular jobsite safety inspections
- Have someone trained in first aid on site if you have no emergency response service

Self-Check -3	Written Test

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. In what condition landscape expert do interact with other staff and customers? 4 points
2. Where does landscape architects work belong? 5 points
3. Discuss employer duties in landscape work? 7 points

Note: Satisfactory rating – 16 points **Unsatisfactory – below 16 points**

You can ask your teacher for the copy of your answer

Score = _____

Rating= _____

Name: _____ Date: _____

Answer sheet

Information Sheet-4	Waste materials disposal procedures and policy

Any enterprise has its own policy and procedures that helps to guide the work operators how to use their time, how to perform their work, how to handle their tools, materials and equipments and other activities. Therefore, the employee before starting their work, they should know or understand the enterprise policies and procedures to perform their work properly with in proposed time. Knowing the policy and procedures of the enterprise may support the employee from doing wrong things.

Enterprise policy and procedures in relation to workplace practices, handling and disposal of materials is observed.

One of the most important aspects of a workplace observation is employee performance. Observe employees during their normal course of work; use a checklist to assess their performance in regards to health and safety procedures relevant to their tasks. For instance, a food handler must properly sanitize a workspace before preparing food while a welder must wear proper safety gear before performing a welding task. So is the landscape expert also do the same thing.

A checklist should include industry-specific guidelines for proper attire, use of equipment, disposal of materials and adherence to guidelines for safety and cleanliness. Landscape architects spend most of their time in offices creating plans and designs, preparing models and cost estimates, doing research, or attending meetings with clients and other professionals involved in a design or planning project.
The remainder of their time is spent at the site. During the design and planning stage, landscape architects visit and analyze the site to verify that the design can be incorporated into the landscape. After the plans and specifications are completed, they may spend additional time at the site observing or supervising the construction.

Those who work in large national or regional firms may spend considerably more time out of the office traveling to sites away from the local area.

Persons planning a career in landscape architecture should appreciate nature, enjoy working with their hands, and possess strong analytical skills. Creative vision and artistic talent also are desirable qualities. Good oral communication skills are essential; landscape architects must be able to convey their ideas to other professionals and clients, and to make presentations before large groups.

Self-Check -4	Written Test

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. Discuss the advantages of following policy and procedures of work place procedures during landscape work. 6 points
2. What is the most important aspect of a workplace observation? 4 points

Note: Satisfactory rating – 10 points Unsatisfactory – below 10 points

You can ask your teacher for the copy of your answer

Answer sheet

Score = _____

Rating= _____

Name: _____ Date: _____

Short answer questions

Information Sheet-5	Reporting problems or difficulties

During the process of landscape work operation, the workers and the working environment may face certain challenges; to tackle these challenges reporting of problems and difficulties is very important. This is because inconvenient situations may face the workers and the people those settled around the working environment.

Related to the above conditions and performance to achieving the goal of the task, problems and difficulties are practically expected to be seen. These situations should be immediately reported to directly concerned bodies to correct and retain the work functional, productive and safe.

Problems or difficulties in completing work to required standards or timelines are reported to supervisor.

Completing your work: Complete a landscaping estimate by knowing your material costs plus the cost of your labor. In order to successfully bid your job you need to know all aspects of what it is going to cost in order to complete the job.

Most landscaping projects are completed without difficulties and people are satisfied with the finished project. Some projects involve minor disputes over workmanship and contract issues which are due mostly to communication errors.

One of the more common reasons why many landscape contractures are unprofitable is that they fail to calculate properly and recover all their general and administrative overhead expense.

Plan your project carefully. Make a plan.

- "To scale" drawing is important for visualization of the project and for determining and satisfying your expectations
- Always consider your budget when planning.
- Find pictures of landscapes and materials you like and show them to the landscape contracting business.
- Study your plans carefully, walk through the project and approve the plans in writing before work begins.

1. Visit the site. In order to properly estimate what landscaping services are going to cost the customer, you need to visit the site and conduct an interview with the customer. Ask the customer what services they wish to have performed and how they wish to design their property. Use a measuring tape and take note of how much removal is required such as weed removal, spraying weed killer and debris removal. Measure the length of PVC pipe, sprinkler system and drip line.

2. Estimate your materials costs. After interviewing your customer, you will have a general idea of what the client wants. For inexpensive landscaping materials go to home depot or lower's. Get costs for the type of plants, shrubs or flowers the customer wanted. Find the cost of PVC, sprinkler materials, timer box, weed kill, fertilizer, topsoil and bark or rock. Estimate the appropriate material costs according to your measurements.

3. Communicate: Do not be afraid to talk to the landscape construction professional or representative of the landscape contracting business during the project. Most problems arise between clients and the landscape contracting business because of lack of communication. If the business refuses to return calls, or if you refuse to communicate your questions or problems, the project is sure to result in a dispute.

Self-Check -5	Written Test

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. Discuss the importance of reporting problems and difficulties during landscape work. 4 points
2. In order to successfully bid your job in landscape work what should be known? 5 points
3. How do you plan project in landscape work? 6 points

Note: Satisfactory rating – 15 points Unsatisfactory – below 15 points

You can ask your teacher for the copy of your answer

Score = _____

Rating= _____

Name: _____ Date: _____

Answer sheet

Operation Sheet 1	undertake landscape work

Procedures to undertake landscape work

Step1. Planning:-

Step 2. Rough Grades

Step3. Drainage

Step4. Rough Irrigation

Step 5. Landscapes

Step6. Finish Grade

Step 7. Planting

Sep 8. Finish Irrigation

Step9. Mulch

Step10. Complete landscape work

Operation Sheet 2	Perform repair and maintenance of landscape features

Step1. Cleaning up

Step2. Aeration

Step3. Pruning

Step 4.Mulching

Step5. Edging

LAP Test	Practical Demonstration

Name: _____ Date: _____

Time started: _____ Time finished: _____

Instruction: Given necessary templates, tools and materials you are required to perform the following tasks within 8 hours.

Task 1. Undertake landscape work

Task 2. Perform repair and maintenance landscape features

List of reference Materials

1. http://www.mwtrain.com.au/Support-Landscape-Work-book
2. http://www.vu.edu.au/units/rtc1202a
3. https://help.landscape.canonical.com/FAQ
4. https://www.getpond.com/10-steps-successful-landscape

Horticultural Crops Production

Level I

Learning Guide# 39

Unit of Competence: -Perform Landscape Work

Module Title:-Performing Landscape Work

LG Code: AGR HCP1 M10 LO3-LG 39

TTLM Code: AGR HCP1 TTLM 1219v1

LO3: Handle materials and equipment

Instruction Sheet	Learning Guide#39

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

- storing and disposing waste material
- handling and transporting materials and equipment's
- maintaining a clean and safe work site

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 –**

- Store waste material and debris produced during landscape work in a designated area according to supervisor's instructions.
- Handle and transport materials, equipment and machinery.
- Maintain a clean and safe working site while undertaking landscaping activities.

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below 3 to 4.
3. Read the information written in the information "Sheet 1, Sheet 2, and Sheet 3.
4. Accomplish the "Self-check 1, Self-check 2 and Self-check 3" **in page -48, 51 and 54** respectively.

Information Sheet-1	Storing and disposing waste material

Waste Materials are defined as large and small pieces of the materials indicated which are excess to the contract requirements and generally include materials which are to be salvaged from existing construction and items of trimmings, cuttings and damaged goods resulting from new installations, which cannot be effectively used in the Work.

Waste material and debris produced during landscape work is stored in a designated area according to supervisor's instructions.

Construction Waste Management Plan: Before start of construction, submit for the approval of the Contracting Officer's Representative a construction waste management plan indicating how Contractor proposes to collect, segregate, and dispose of all construction wastes and debris produced by the work of this Contract.

Storage of waste material and debris

"The law says you must keep every part of your construction site in 'good order' and every place of work clean". The objective is to achieve what is usually called a good standard of working site. In addition, all contractors must plan, manage and monitor their work so it is carried safely and without risks to health and environment. This includes careful planning on how the site will be kept tidy and work operation actively managed.

Safe and efficient waste materials storage depends on good co-operation and co-ordination between everyone involved including, client, contractors, suppliers and the residents.

What waste materials may apply to this standard?

Plant debris, mulches and compost, plastic, metal and paper-based materials, litter and broken components. These may be recycled, re-used, returned to the manufacturer or disposed of according to enterprise work procedures.

Construction Waste: Waste materials generated by construction activities, such as scrap, damaged or spoiled materials, temporary and expendable construction materials, and aids that are not included in the finished project, packaging materials, and waste generated by the workforce.

Demolition Debris: Waste resulting from removing a building from the site by wrecking.

Land Clearing Debris: Vegetative waste materials removed from a site.

Disposal (or Land filling or Landfill Disposal): Depositing materials in a solid waste disposal facility licensed for the subject materials (in this case, C&D materials).

Deconstruction: The systematic disassembly of a building, generally in the reverse order of construction, in an economical and safe fashion, for the purposes of preserving materials for their reuse.

Workplace equipment and personal, protective equipment should be maintained in safe and good working condition.

- **Non-Recyclable Waste**: Collect and segregate non-recyclable waste for delivery to a permitted landfill site
- **Mixed Solid Waste:** Solid waste usually collected as a municipal service, exclusive of waste materials listed above.
- **Hazardous Waste:** Control and disposal of hazardous waste is specified in Division 1 "Environmental Protection" section

Disposal Sites, Recyclers, and Waste Materials Processors: Use only facilities properly permitted by local authorities where applicable

Handling: Deposit all indicated recyclable materials in the containers in a clean (no mud, adhesives, solvents, petroleum contamination), debris-free condition. Do not deposit contaminated materials into the containers until such time as such materials have been cleaned.

In addition to being beautiful, the trees and gravel in the Place des Vosges are good for microclimate, wildlife and hydrology. All good foresters know that tree planting must serve multiple objectives: beauty, timber production, habitat creation, water management, public recreation, carbon cycle re-balancing etc. Urban landscape architects, on the whole, are less enlightened. Too often, they think of tree planting as decorative activity akin to the placement of public art in cities. Urban foresters should broaden their horizons, as rural foresters claim to have done.

Self-Check -1	Written Test

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. Define waste materials? 4 points
2. What mean Storage of waste material and debris? 4points
3. List the Waste material and debris produced during landscape work? 8 points

Note: Satisfactory rating – 16 points **Unsatisfactory – below 16 points**

You can ask your teacher for the copy of your answer

Score = _____

Rating= _____

Name: _____ Date: _____

Answer sheet

Information Sheet-2	Handling and transporting materials and equipment's

Appropriate handling and transportation of materials, equipment and machinery

To operate these work activity different materials, equipments and machinery are very important component of the work. These mentioned materials, equipment and machinery needs great care during handling and transportation. During handling and transportation the users of these materials, equipment and machinery should give great emphasis to sustain their durability unless they may be exposed for different damage and for unexpected expense.

Material handling equipment is all equipment that relates to the movement, storage, control and protection of materials, goods and products throughout the process of manufacturing, distribution, consumption and disposal.

Bulk material to care out landscaping work can be transported by any means.

- **Garden Soils**. All types of garden soils. Rich organic soil. Soil preparation and grading is a big part of the landscaping business.
- **Quarry materials**. Crusher Dust; Concrete blend; Drainage gravels 5mm to 75mm.
- **Recycled concrete**. Crusher Dust; Road-bases; Drainage gravels from 5mm to 75mm.
- **Sands**. Fill sand; Plastering sand; Brackish loam; Soft fall.
- **Mulch**. Forest mulch; Forest fines;
- **Fill**. Select and processed fill, General fill.

Means of transporting

- **Equipment :Trucks for hire**

No Equipment:-. Material can also be transported manually or animals

It takes time to get equipment to and from the job site. The customer should pay this cost as surely as it should pay for the actual time the equipment is working at the site. Time spent mobilization and demobilizing equipment for the should be estimated and included in the estimate of direct job overhead expense at the charge out rate for the equipment.

If the work crew leaves from the company's yard(with equipment) each morning, time for loading and unloading should be included in the estimate of direct job overhead expense.

It is obtained by multiplying the number of crew members by the length of time each one spends loading and unloading per day and then multiplying this figure by the projected number of days for the job.

Landscape delivery truck drivers deliver trees and shrubs to sites where landscaping workers will plant them. Landscape irrigation truck drivers operate large trucks that carry water in tanker trucks to refill the supplies needed to provide water for crops.

Environmental Requirements: Transport recyclable waste materials from the Work Area to the recycle containers and carefully deposit in the containers without excess noise and interference with other activities, in a manner to minimize noise and dust. Reclose container covers immediately after materials are deposited.

- Do not place recyclable waste materials on the ground adjacent to a container

Source Separation: Separate, store, protect, and handle at the project site all identified recyclable and salvageable waste products to prevent contamination of materials and maximize recyclability and salvage ability of materials

Plastics: Collect recyclable plastics (polystyrene and others specifically marked for recycling) daily from work areas and deposit in designated container

Glass: Remove waste glass products (sheet, bottles, etc.) daily from the work area and deposit in designated containers.

Waste with a low carbon to nitrogen ratio, e.g., grass clippings, etc. shall be incorporated into piles with in forty-eight (48) hours of on-site arrival.

Vehicles and Mobile Equipment

- Train workers to stay clear of backing and turning vehicles and equipment with rotating cabs.
- Maintain back-up alarms for equipment with limited rear view or use someone to help guide them back.
- Be sure that all vehicles have fully operational braking systems and brake lights.
- Use seat belts when transporting workers in motor and construction vehicles.

- Maintain at least a 10-foot clearance from overhead power lines when operating equipment.
- Block up the raised bed when inspecting or repairing dump trucks.
- Know the rated capacity of the crane and use accordingly.
- Ensure the stability of the crane.
- Use a tag line to control materials moved by a crane.
- Verify experience or provide training to crane and heavy equipment operators.
- Be sure that all off-road equipment used on site is equipped with rollover protection.

Self-Check 2	Written Test

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. What is the importance of appropriate handling and transportation of materials, equipment and machinery? 5points

Note: Satisfactory rating – 5 points **Unsatisfactory – 5 below points**

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

Score = _____

Rating= _____

Name: _____ Date: _____

Answer sheet

Information Sheet-3	Maintaining a clean and safe work site

The work place should be clear and safe always, this favorable situation encourages the workers to perform their task properly. To sustain clean and safe work site, this place should be cleaned before starting and after finishing their work.

Regular maintenance is essential to keep equipment, machines and the work environment safe and reliable. Lack of maintenance or inadequate maintenance can lead to dangerous situations, accidents and health problems. Maintenance is a high-risk activity with some of the hazards resulting from the nature of the work. Maintenance is carried out in all natural area conservation and all workplaces.

Protection of Existing Structures and Property

Contractor shall take proper precautions when working on-site to protect any and all association structures, infrastructure and utilities. Any damages to association structures will be reported immediately to the Customer's Representative. Any damages caused by Contractor action shall be corrected and/or paid for by the Contractor at no cost to the Customer. The company safety program should include procedures for the identification, evaluation, and prevention or control of workplace hazards, specific job hazards, and potential hazards that may arise. Proper precautions should be identified and implemented whereby cleanup crews can establish a controlled area to temporarily store household hazardous waste until a specialized contractor could be brought in to deal with the material.

Equipment that has rusted or deteriorating surfaces, or if it includes flood- damaged wood/particle board or plastic laminate components should be discarded.

Many households commonly contain numerous solvents, chemicals, paints, heavy metals, pesticides, compressed gases and petroleum products that are hazardous to human health if not handled properly. Additionally, many commercial establishments or local industries contain similar hazardous materials which raise concern if not properly handled upon discovery.

Oil-Contaminated Debris: Oil-contaminated debris or material contaminated with other petroleum products should be segregated from other types of debris prior to disposal, and should be stored in a well-ventilated area. If stored outdoors, piles should be covered to keep precipitation from contaminating soil or water. Some oil-contaminated debris generated by households may be acceptable at a municipal waste combustor.

Successful gardening (landscaping)/ grounds maintenance experience of increasing responsibility that has included demonstrated knowledge and use of gardening(landscaping) tools, equipment, and chemicals; landscaping, work with plant diseases, pest control, safe use of pesticides; planting and caring for lawns, plants, and ground covers; extensive public contact with people of diverse cultures, language groups, and with people who have disabilities; demonstrated skill in following oral and written instructions; demonstrated ability to read and understand written English instructions, directions, labels, written warnings, diagrams, drawings, and/or blue prints as related to the position; or, an acceptable equivalent combination of education and experience.

Drainage Control Requirements:

a. Storm water shall be diverted from the operational area;

b. Windrows shall be constructed parallel to topographical slopes; and,

c. The site shall be graded to prevent ponding of water in the active composting areas.

Access and Security Requirements:

a. The site shall be secured by means of gates, chains, berms, fences, or other security measures, to

Prevent unauthorized entry; and,

b. An all-weather road to the site shall be maintained in good condition;

Employee Duties

- Follow all safety rules
- Wear and take care of personal protective equipment
- Make sure all safety features for tools and equipment are functioning properly
- Don't let your work put another worker in danger
- Replace damaged or dull hand tools immediately
- Avoid horseplay, practical jokes, or other activities that create a hazard
- Don't use drugs or alcohol on the job
- Report any unsafe work practice and any injury or accident to your supervisor

Each worker must receive safety orientation and training on applicable OSHA standards, company safety requirements and/or have enough experience to do his/her job safely.

Self-Check 3	Written Test

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. What is the important of clear and safe work place (site)? 6 points
2. List the requirements to Successful gardening (landscaping). 8 points
3. Describe the drainage control requirements. 6 points

Note: Satisfactory rating – 20 points **Unsatisfactory – 20 below points**

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

Score = _____

Rating= _____

Name: _____ Date: _____

Answer sheet

List of reference Materials

5. http://www.mwtrain.com.au/Support-Landscape-Work-book
6. http://www.vu.edu.au/units/rtc1202a
7. https://help.landscape.canonical.com/FAQ

Horticultural Crops Production

Level I

Learning Guide# 40

Unit of Competence: -Perform Landscape Work

Module Title:-Performing Landscape Work

LG Code: AGR HCP1 M10 LO4-LG- 40

TTLM Code: AGR HCP1 TTLM 1219v1

LO4. Clean up on completion of landscaping work

Instruction Sheet	Learning Guide#40

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

- dispose Materials
- cleaning, maintaining and storing Tools and equipment
- Making the Site good
- reporting Work outcomes

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 –**

- Return materials to store or dispose according to supervisor's instructions and OHS requirements.
- Clean, maintain and store tools and equipment according to manufacturer's specifications and supervisor's instructions.
- According to supervisor's instructions and good environmental and OHS practices.
- Report work outcomes to the supervisor.

Learning Instructions:

8. Read the specific objectives of this Learning Guide.
9. Follow the instructions described below 3 to 4.
10. Read the information written in the information "Sheet 1, to Sheet 4.
11. Accomplish the "Self-check 1, Self-check 2, Self-check 3 and self check 4" **in page -58, 61, 65 and 69** respectively.

Information Sheet-1	Returning materials to store or dispose

Materials are returned to store or disposed of according to supervisor's instructions and OHS requirements.

Hazardous wastes are wastes that have the potential to harm humans or the environment. Household hazardous wastes like oils, chemicals, batteries, old computers and mobile phones should be discarded or recycled safely and responsibly to protect the environment and keep your home safe.

Periodic inspections and procedures for correction and control provide a method of identifying existing or potential hazards in the workplace, and eliminating or controlling them. Hazard control is the heart of an effective Injury and Illness Prevention Program.

Here are many options to help you dispose of household hazardous wastes safely, protect the environment and keep your home safe. Recycling programs are available for some hazardous wastes.

An effective hazard control system will identify: hazards that exist or develop in your workplace, how to correct those hazards, and steps you can take to prevent their recurrence. If you have an effective system for monitoring workplace conditions:

There are many options to help you dispose of household hazardous wastes safely, protect the environment and keep your home safe. Recycling programs are available for some hazardous wastes.

Your employees should be encouraged to tell you or their supervisors of possibly hazardous situations, knowing their reports will be given prompt and serious attention without fear of reprisal. When you let them know that the situation was corrected (or why it was not hazardous), you create a system by which your employees continue to report hazards promptly and effectively.

The remnants are the common phenomenon of any work places. The items of these remnants are varying from material to material, because different work operation needs different materials.

These materials should be segregated according their items, based on this segregation the reusable remnants should be processed to use again and non reusable remnants disposed without polluting the environment.

If the materials are stored properly in a planned manner we can mitigate or reduce the dangers on the employees and on the environment. Storing materials in an open yard requires attention to combustible materials, access to power lines and fire protection.

Self-Check -1	Written Test

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. Discuss the advantage of storing materials properly on the completion of landscaping work. 5 points
2. What are options of waste materials disposing? 5 points

Note: Satisfactory rating – 10 points Unsatisfactory – below 10 points

You can ask your teacher for the copy of your answer

Score = _____

Rating= _____

Name: _____ Date: _____

Answer sheet

Information Sheet-2	Cleaning, maintaining and storing tools and equipment

Tools and equipment are cleaned, maintained and stored according to manufacturers' specifications and supervisor's instructions. Landscape equipments and tools can be divided into two independent entities. One is the landscape making equipments and the other is the landscape maintenance equipments. Landscaping is an important aspect of owning a home or a business.

Every home or business owner needs quality for proper landscape maintenance. Over the life of your home or business ownership, the occasional tree will fall down, the random perennials will needs planting, and stubborn weeds will need to be taken care of. Our rugged and will provide you with years of service you need to maintain your home or business. Much of landscaping maintenance involves cutting vegetation, in one form or another. Many tree jobs are done on expensive properties which need to look as nice when the job is done as they did before the trees were pruned or removed.

An important aspect of any business is the maintenance and storage of tools and equipment. The investment in tools and equipment is a significant part of the overhead expenses in any operation. Proper selection and maintenance of equipment are important factors in managing business. Selecting the proper tool for the job and using the tool properly will increase efficiency and reduce maintenance problems. Purchase tools, which are well-made and suited to the intended use. Commercial usage may entail more heavy duty demands on equipment.

Hand tools:

1. Clean dirt and debris from tools after each use.
2. Oil metal parts to prevent rust.
3. Lightly sand rough wooden handles and apply linseed oil.
4. Repair loose handles.
5. Sharpen blades of cutting tools.
6. Store tools in a clean dry storage area.
7. Protect surfaces of cutting tools in storage.

Equipment:

1. Store equipment in a clean dry storage area.

2. Rinse and clean spray equipment after each use.

3. Clean spreaders and check wheel-driven gears.

4. Clean carts and wheelbarrows after use.

Storing tools and equipment for landscape work

- Maintain all hand tools and equipment in a safe condition and check them regularly for defects. Remove broken or damaged tools and equipment from the jobsite.
- Follow the manufacturer's requirements for safe use of all tools.
- Use double insulated tools, or ensure that the tools are grounded.
- Equip all power saws (circular, skill, table, etc.) with blade guards.
- Make sure guards are in place before using power saws. Don't use power saws with the guard tied or wedged open

Cleaning materials and equipment

- hand wash area and soap
- brooms
- recycling garbage bins
- hand towel dispenser
- garbage bins and bags
- disinfectant for secateurs
- lockable fertilizer storage as per manufacturers’ guideline

Self-Check -2	Written Test

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. What are the two categories landscaping tools and equipments? 4 points
2. How hand tools of performing landscape maintained cleaned? 6 points
3. Discuss the storing of equipments used during landscape work. 5 points

Note: Satisfactory rating – 15 points Unsatisfactory – below 15 points

You can ask your teacher for the copy of your answer

Score = _____

Rating= _____

Name: _____ Date: _____

Answer sheet

Information Sheet-3	Making the Site good

Understanding of instruction for good environmental and OHS practices

Instruction is a statement of principles that the organization prepare to manage their employees, the work activities and environmental issues. Instruction gives a clear direction to the members of the entire organization

Site is made good according to supervisor's instructions and good environmental and OHS practices. Contractor, responsible for the maintenance of the landscape areas, seeks to provide an attractive, colorful and resource efficient landscape for the benefit of the Customer.

What may occur when a site is made good?

Paths are swept and cleaned, planted areas are checked to ensure they are well presented, damaged turf is replaced/reason, disturbed areas are repaired, all materials, debris, tools and equipment are removed from site, damaged plants are pruned or replaced, and other signs of disturbance or damage are corrected.

Housekeeping and Access at Site

- Keep all walkways and stairways clear of trash/debris and other materials such as tools and supplies to prevent tripping.
- Keep boxes, scrap lumber and other materials picked up. Put them in a dumpster or trash/debris area to prevent fire and tripping hazards (Figure 2).
- Provide enough light for workers to see and to prevent accidents.

What should I know about follow-up and monitoring?

Review the information obtained from regular inspections to identify where immediate corrective action is needed. Identify trends and obtain timely feedback. Analysis of inspection reports may show the following:

- priorities for corrective action
- need for improving safe work practices
- insight about why accidents are occurring in particular areas

- Need for training in certain areas?
- areas and equipment that require more in-depth hazard analysis

The health and safety committee should review the progress of the recommendations, especially when they pertain to the education and training of employees. It is also the Committee's responsibility to study the information from regular inspections. This will help in identifying trends for the maintenance of an effective health and safety program.

Water Application & Scheduling: Hand water as needed to supplement natural rainfall and maintain plantings in a healthy, stress-free condition. It is the contractor's responsibility to make sure that plants receive adequate water regardless of weather conditions.

Clan Landscape pathway

Walkways and paths, while functional, can also serve as eye-catching pieces of design in a landscape. From the type of stone used to the patterns designed, contractors have countless options.

"Typically, our hardscape is all-natural stone," says Darren Bishop, owner of Darren Bishop Landscape & Design, based in Nashville, Tennessee. The company offers plant installation, irrigation, lighting, patios, retaining walls and other outdoor living features. "Very rarely do we use pavers. I just don't like them," Bishop says. "I think they're just a cheaper-looking product and they date themselves. So mainly, it's stone on concrete foundations, usually a flagstone and mortar."

Travis Friesen, owner of Friesen Landscaping in Lincoln, Nebraska, says his paths and walkways begin with the installation of four inches of crushed limestone, to provide stability. Then, just like Bishop, he typically uses flagstone.

"We typically like to use large slabs of flagstone. They don't wobble where they take three or four guys to muscle them in place," says Friesen.

Turfing

Consisting of a shallow rooting grass and the soil it is growing in, is placed on the slope. A technique commonly used on gentle embankment slopes. Its only engineering function is to armour.

Sites

This technique can be used on any gently sloping site (less than 30°). It is normally used on well-drained materials, where there is a minimal risk of **slumping**

Materials

- Flat shovel with a sharp edge to cut the turf:
- Old khukuri to cut the turf to shape;
- Water to keep the turf moist;

  Wooden rammer.

  If the slope to be turfed is greater than about 25°, wooden pegs about 300 mm long and 30 mm in diameter will be required.

Pruning

Pruning is a horticultural and tree practice involving the selective removal of certain parts of a plant, such as branches, buds, or roots. Reasons to prune plants include deadwood removal, shaping (by controlling or redirecting growth), improving or sustaining health, reducing risk from falling branches, preparing nursery specimens for transplanting, and both harvesting and increasing the yield or quality of flowers, ornamentals and fruits.

Follow Proper Pruning Techniques

Proper pruning enhances the beauty of almost any landscape tree and shrub, while improper pruning can ruin or greatly reduce its landscape potential. In most cases, it is better not to prune than to do it incorrectly. In nature, plants go years with little or no pruning, but man can ruin what nature has created. By using improper pruning methods healthy plants are often weakened or deformed. In nature, every plant eventually is pruned in some manner. It may be a simple matter of low branches being shaded by higher ones resulting in the formation of a collar around the base of the branch restricting the flow of moisture and nutrients. Eventually the leaves wither and die and the branch then drops off in a high wind or storm. Often, tender new branches of small plants are broken off by wild animals in their quest for food. In the long run, a plant growing naturally assumes the shape that allows it to make the best use of light in a given location and climate.

The necessity for pruning can be reduced or eliminated by selecting the proper plant for the location. Plants that might grow too large for the site, are not entirely hardy, or become unsightly with age should be used wisely and kept to a minimum in the landscape plan. Advances in plant breeding and selection in the nursery industry provide a wide assortment of plants requiring little or no pruning. However, even the most suitable landscape plants often require some pruning. The guidelines presented in this publication should be helpful when pruning any plant.

Reasons for Pruning

- to train the plant
- to maintain plant health
- to improve the quality of flowers, fruit, foliage or stems
- to restrict growth

Fig. 3.1. Waste material management during performing of landscape work

Self-Check 3	Written Test

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. What may occur when a site is made good in landscape work? 4 points
2. List the materials required during turfing? 6 points
3. What is pruning? 4 points
4. Write the reasons of pruning? 6 points

Note: Satisfactory rating - 20points **Unsatisfactory – 20 below points**

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

Score = _____

Rating= _____

Name: _____ Date: _____

Answer sheet

Information Sheet-4	Reporting work outcomes

After completion of work activities the output of the work should be reported to the concerned bodies on time. This report of work out put gives some clue about the positive performance of the activities and the weakness or limitation of the work activities. Based on the report of work outcomes the organization either improves the way of work procedures (method) or continues with the former method.

Work outcomes are reported to the supervisor. Landscape contractor shall provide qualified on-site supervision to insure high quality work and provide accurate reports.

Landscape work focuses most of its attention on economic outcomes—wages, incomes, employment, and other indicators of economic security. When it comes time to do landscape work on your property there are a number of things you should do to make sure there are no nasty surprises when it comes to paying for your landscape work. But implicit in such an analysis is also the story of how the economic landscape has changed through the years for Ethiopia workers. Unlike natural landscapes, the economy can change its overall surroundings rapidly and in direct response to political and social policy.

Get everything in writing. Once you decide on who you will work with and what is to be done, get it all recorded on paper. Even the best intentions can go awry with misunderstandings. Then there are changes that need to be recorded each step of the way. The more detailed your agreements are the better both builder and owner will be likely to avoid mistakes, misunderstandings and lawsuits.

If there's something you are not sure about, ask questions. Get prices for everything. If you do not feel the charges are right, query them before work is done. In fact, the best way to price out landscape work is to get everything detailed out for as much labor and material as is possible. Be honest with your designer or contractor about what you can afford and don't hope things won't cost more.
Monitoring (Assessing how well one is doing when learning or doing something) is more difficult than generally recognized and only gives meaningful information over the long term.

Workers typically perform a variety of tasks, which may include any combination of the following: sod laying, mowing, trimming, planting, watering, fertilizing, digging, raking, and sprinkler installation. Workers may help brick and stone masons. Exclude workers who also perform duties of pruners or sprayers/applicators. A good monitoring system can allay fears and help to identify solutions.

Reports

Inspection records are important. Past inspection records show what has been identified. They also show what an inspection team concentrated on and what areas it did not inspect. The inspection report can draw attention to possible hazards. However, do not simply repeat or copy previous inspections. Use the inspection report to determine whether previous recommendations were implemented.

Are there other types of inspection reports that may be useful? The following describes three other types of inspection reports:

- Ongoing
- Pre-operation
- Periodic

Supervisors and workers continually conduct ongoing inspections as part of their job responsibilities. Such inspections identify hazardous conditions and either correct them immediately or report them for corrective action. The frequency of these inspections varies with the amount and conditions of equipment use. Daily checks by users assure that the equipment meets minimum acceptable safety requirements.

Pre-operation checks involve inspections of new or modified equipment or processes. Often these are done after workplace shutdowns.

Periodic inspections are regular, planned inspections of the critical components of equipment or systems that have a high potential for causing serious injury or illness. The inspections are often part of preventive maintenance procedures or hazard control programs. The law specifies that qualified persons periodically inspect some types of equipment, such as elevators, boilers, pressure vessels, and fire extinguishers, at regular intervals.

What should the final report have in it?

To make a report, first copy all unfinished items from the previous report on the new report. Then write down the observed unsafe condition and recommended methods of control. Enter the department or area inspected, the date and the inspection team's names and titles on top of the page. Number each item consecutively, followed by a hazard classification of items according to the chosen scheme.

State exactly what has been detected and accurately identify its location. Instead of stating "machine unguarded," state "guard missing on upper pulley."

Assign a priority level to the hazards observed to indicate the urgency of the corrective action required. For example:

A = Major--requires immediate action

B = Serious--requires short-term action

C = Minor--requires long-term action

Make management aware of the problems in a concise, factual way. Management should be able to understand and evaluate the problems, assign priorities and quickly reach decisions. Take immediate action as needed. When permanent correction takes time, take any temporary measures you can, such as roping off the area, tagging out equipment or posting warning signs.

After each listed hazard, specify the recommended corrective action and establish a definite correction date. Each inspection team member should review for accuracy, clarity and thoroughness.

Self-Check -4	Written Test

Directions: Answer all the questions listed below. Illustrations may be necessary to aid some explanations/answers.

1. Discuss the advantages of reporting landscape work to supervisor on completion of landscape work. 4 points
2. Define the term Ongoing, pre-operation and Periodic inspections in reporting of landscape work? 5 points
3. What are the contents of reports of landscape work on the completion of landscape work? 6 points

Note: Satisfactory rating – 15 points Unsatisfactory – below 15 points

You can ask your teacher for the copy of your answer

Score = _____

Rating= _____

Name: _____ Date: _____

Answer sheet

List of Reference Materials

1. http://www.mwtrain.com.au/Support-Landscape-Work-book
2. http://www.vu.edu.au/units/rtc1202a
3. https://help.landscape.canonical.com/FAQ
4. https://www.landscaperscanberra.com/landscaping-maintenance/

NO	TTLM developer Name	Back ground Qualification	College Address	College Name	Cell Phone	E-mail
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