Ethiopian TVET-System

Clerical Work Support

Level-II

Based on August 2012G.C. Occupational Standard

Module Title: Standardize and sustain 3S

TTLM Code: EIS CWS2 TTLM0919V1

This module includes the following Learning Guides

LG41: Preparation for work
LG Code: EIS CWS2 M13 L01-LG41

LG42: Standardize 3S
LG Code: EIS CWS2 M13 L02-LG42

LG43: Sustain 3s
LG Code: EIS CWS2 M13 L03-LG43

INTRODUCTION

This trainer's guides were developed to assist you in delivering the standardized and sustain 3S training program.

The standardize and sustain 3S training is to developed to equip the trainees with the required competency in the course activities in their work area.

This training guide concern the learning module that help you in providing the competence and achieving its learning objective and outcome.

The role of trainer is to deliver an opportunities aim at helping the trainees improving and developing their competences. You are expecting to guide and assist them when they go through the learning activities.

SUMMARY OF LEARNING GUIDE

After completing this learning guide, you should be able to:

LO1 the preparation of work

LO2 standardized 3S

LO3 Sustain 3S

How to use TTLM

➢ Read through the learning guide carefully, its divided into sections that cover all the knowledge, skill and attitude that you needs

➢ Read an information sheets and complete the self -check at the end of each section to check your progress.

➢ Make sure to practice the activities in the operation sheets. Ask your trainer to show you the correct way to do thing. Seek assistant from experienced person for guidance.

LG41: Preparation for work

INFORMATION SHEET- 1: Description of preparation of work

<div align="center">

Job can be defined as

</div>

- ✓ A task done as part of the routine of one's occupation or for agreed price
- ✓ It's also a post of employment full-time or part time position
- ✓ Anything a person is expected and obliged to do duty and responsibility.

The requirements for a job vary according to the nature of the job itself. However, a certain work ethic must be cultivated to succeed in any job and this is fundamental to an individual's sense of himself as a worker, as part of production relations and a fundamental economic being. The basic requirements for a job remain the same no matter what the job is, where it is located or what professional and educational qualifications are required for it. These are as follows:

Discipline: Nothing is possible without discipline. Any job requires a fundamental core of discipline from the worker or the employee and this is a quality which is independent of age, post, stature, job and so on. Discipline is absolutely indispensable and provides the impetus for work that can be strenuous, repetitive, boring and even unsatisfactory at times.

> **Qualifications:** This is a more material, tactile need for a job which can be conveyed through degrees and certificates. However education is not limited to what is taught in colleges or vocational training courses. It is the burning desire to learn more, to reach the depths of knowledge about a particular field of interest, to complete the job and learn from it that marks the true enthusiast and the truly learned.

1. Work Instruction
Information about the work

- ☐ Describe what workers need to be able to do on the job

  - ☐ Work functions

  - ☐ Key activities of each work function

☐ Performance indicators

Describe what task to be done or work roles in a certain occupation

Work instruction is a description of the specific tasks and activities within an organization. A work instruction in a business will generally outline all of the different jobs needed for the operation of the firm in great detail and is a key element to running a business smoothly. In other words it is a document containing detailed instructions that specify exactly what steps to follow to carry out an activity. It contains much more detail than a Procedure and is only created if very detailed instructions are needed. For example, describing precisely how a Request for Change record is created in the Change Management software support tool.

Procedures vs. Work Instructions

Many people confuse "procedures" with "work instructions". In fact, most people write work instructions and call them procedures. Knowing the differences of procedures vs. work instructions can help you understand the documentation process much better and, therefore, procedure documentation.

Procedures describe a process, while a work instruction describes how to perform the conversion itself. Process descriptions include details about the inputs, what conversion takes place (of inputs into outputs), the outputs, and the feedback necessary to ensure consistent results. The PDCA process approach (Plan, Do, Check, Act) is used to capture the relevant information.
 Questions that need to be answered in a procedure include:

➢ Where do the inputs come from (suppliers)?

➢ Where do the outputs go (customers)?

➢ Who performs what action when (responsibilities)?

➢ How do you know when you have done it right (effectiveness criteria)?

➢ What feedback should be captured (metrics)?

➢ How do we communicate results (charts, graphs and reports)?

➢ What laws (regulations) or standards apply (e.g., ISO 9001, 8th EU Directive, IFRS, Sarbanes-Oxley)?

Work Manual Self-Check 1	Written Test

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

1. What is the job? (1 point)

2. What is the job requirement? (2 points)

3. List the requirement of job. (5 poinst)

4. What is work? (2 points)

5. Describe work instruction by your own words. (5points)

6. Describe the difference between procedure and work instruction? (5points)

Answer Sheet

Score=
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OHS Requirements

OHS requirements are legislation/regulations/codes of practice and enterprise safety policies and procedures. This may include protective clothing and equipment, use of tooling and equipment, workplace environment and safety, handling of material, use of firefighting equipment, enterprise first aid, hazard control and hazardous materials and substances.

Personal protective equipment includes those prescribed under legislation/ regulations/codes of practice and workplace policies and practices. Safe operating procedures include the conduct of operational risk assessment and treatments associated with workplace organization. Emergency procedures include emergency shutdown and stopping of equipment, extinguishing fires, enterprise first aid requirements and site evacuation.

Occupational safety and health (OSH) also commonly referred to as occupational health and safety (OHS) or workplace health and safety (WHS) is an area concerned with the safety, health and welfare of people engaged in work or employment. The goals of occupational safety and health programs include fostering a safe and healthy work environment. OSH may also protect co-workers, family members, employers, customers, and many others who might be affected by the workplace environment. In the United States the term occupational health and safety is referred to as occupational health and occupational and non-occupational safety and includes safety for activities outside work.

As defined by the World Health Organization (WHO) "occupational health deals with all aspects of health and safety in the workplace and has a strong focus on primary prevention of hazards." Health has been defined as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. Occupational health is a multidisciplinary field of healthcare concerned with enabling an individual to undertake their occupation, in the way that causes least harm to their health. It contrasts, for example, with the promotion of health and safety at work, which is concerned with preventing harm from any incidental hazards, arising in the workplace.

Workplace hazards

Although work provides many economic and other benefits, a wide array of workplace hazards also present risks to the health and safety of people at work. These include "chemicals, biological agents, physical factors, adverse ergonomic conditions, allergens, a complex network of safety risks," and a broad range of psychosocial risk factors.

Physical hazards are a common source of injuries in many industries. They are perhaps unavoidable in certain industries, such as construction and mining, but over time people have developed safety methods and procedures to manage the risks of physical danger in the workplace. Employment of children may pose special problems. Falls are a common cause of occupational injuries and fatalities, especially in construction, extraction, transportation, healthcare, and building cleaning and maintenance.

The transportation sector bears many risks for the health of commercial drivers, too, for example from vibration, long periods of sitting, work stress and exhaustion. These problems occur in Europe but in other parts of the world the situation is even worse. More drivers die in accidents due to security defects in vehicles. Long waiting times at borders cause that drivers are away from home and family much longer and even increase the risk of HIV infections.

Confined spaces also present a work hazard. The National Institute of Occupational Safety and Health defines "confined space" as having limited openings for entry and exit and unfavorable natural ventilation, and which is not intended for continuous employee occupancy. Spaces of this kind can include storage tanks, ship compartments, sewers, and pipelines. Confined spaces can pose a hazard not just to workers, but also to people who try to rescue them.

Noise also presents a fairly common workplace hazard: occupational hearing loss is the most common work-related injury in the United States, with 22 million workers exposed to hazardous noise levels at work and an estimated $242 million spent annually on worker's compensation for hearing loss disability. Noise is not the only source of occupational hearing loss; exposure to chemicals such as aromatic solvents and metals including lead, arsenic, and mercury can also cause hearing loss.

The Act

The *Occupational Health and Safety Act 2004* (the Act) is the cornerstone of legislative and administrative measures to improve occupational health and safety in Victoria. The Act sets out the key principles, duties and rights in relation to occupational health and safety. The general nature of the duties imposed by the Act means that they cover a very wide variety of circumstances, do not readily date and provide considerable flexibility for a duty holder to determine what needs to be done to comply.

The Regulations

The *Occupational Health and Safety Regulations 2007* are made under the Act. They specify the ways duties imposed by the Act must be performed, or prescribe procedural or administrative matters to support the Act, such as requiring licenses for specific activities, keeping records, or notifying certain matters.

Guidance

Effective OHS regulation requires that Work Safe provides clear, accessible advice and guidance about what constitutes compliance with the Act and Regulations. This can be achieved through Compliance Codes, Work Safe Positions and non-statutory guidance ("the OHS compliance framework"). For a detailed explanation of the OHS compliance framework, see the Victorian Occupational Health and Safety Compliance Framework Handbook.

Policy

Not every term in the legislation is defined or explained in detail. Also, sometimes new circumstances arise (like increases in non-standard forms of employment, such as casual, labour hire and contract work, or completely new industries with new technologies which produce new hazards and risks) which could potentially impact on the reach of the law, or its effective administration by Work Safe. Therefore, from time to time Work Safe must make decisions about how it will interpret something that is referred to in legislation, or act on a particular issue, to ensure clarity. In these circumstances, Work Safe will develop a policy. A policy is a statement of what Work Safe understands something to mean, or what Work Safe will do in certain circumstances.

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

1. What is OHS represents for (2 point)

2. What is OSH represents for? (1 point)

3. What is WHS represents for. (1 point)

4. What are the goals of OHS? (2 points)

5. List some examples of OHS requirements in your work areas. (10 points)

Answer sheet

Score=----------------------

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Information Sheet 3	Tools and Equipment Preparation for 3S

Tools and Equipment used to implement 3S

You are required to prepare and use tools and equipment to implement sort, set in order and shine activities in to your work station. The following are some tools and equipment that help you in the implementation of 3S. **Tools and materials used to implement Sort activity**

Tools and materials are required to implement sort, set in order and shine activities in work stations. The following are some tools and materials used to implement the first pillar of 5S-Sort.

- Red tags   sticker
- Hook   nails
- Shelves   chip wood
- Sponge   broom
- pencil   shadow board/ tools board
- Formats (for recording necessary and unnecessary items, plans etc…)

Tools and materials used to implement set in order

The following are some tools and materials used to implement the second pillar of 5S-Set in order.

Tools and materials used to implement shine

The following are some tools and materials used to implement the third pillar of 5S-Shine.

- Sponges
- Brooms
- Brushes
- Spades
- Vacuum cleaners
- Waste baskets
- Dust bins
- Gloves

- Dust masks

- Detergents

- Containers

- Oils

- Bolts

- Screws

- Boots shoes

Self-Check 3	**Written Test**

Instructions: Perform the following tasks. Write your answers in the answer sheet provided:

1. List at least 10 tools and materials used to implement Sort. (10 points)

2. List at least eight tools and materials used to implement Set in order. (8 points)

3. List at least eight tools and materials used to implement Shine. (8 points

Answer   sheet

Score =-------------------------------------

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Name: _____ Date: _____

SORT

Overview of red tagging

The Red-Tag Strategy is a simple method for identifying potentially unneeded items in the factory or workshop, evaluating their usefulness and dealing with them appropriately. Red-tagging means putting red tags on items in the factory or workshop that need to be evaluated as being necessary or unnecessary. A Red tag is a red colored tag used to identify items no longer needed in a particular work area. The red tags catch people's attention because red is a colour that stands out. An item with a red tag is asking three questions:

 is this item needed?

 If it is needed, is it needed in this quantity?

 If it is needed, does it need to be located here?

Once these items are identified, they can be held in a "Red Tag Holding Area" for a period of time to see whether they are needed, disposed of, relocated, or left exactly where they are.

Red-tag Holding areas

In order to implement the red-tag strategy effectively, a red-tag holding area must be created. A red-tag holding area is an area set aside for use in storing red-tagged items that need further evaluation. Red-tagging is helpful when the need or frequency of need for that item is unknown. When an item is set aside in a red-tag holding area and watched for an agreed-upon period of time people tend to be more ready to let it go when that time is over.

There are two red-tag holding areas: local and central holding areas. Local red-tag holding area is used to manage the flow of red-tagged items with in a local department or production area. Central red-tag holding area is used to manage the flow of items that cannot or should not be disposed of by individual departments or production area. Usually central red-tag holding area is used by an organization that is launching a companywide red-tagging effort.

Step 1: Launch the red-tag project

Red-tag campaigns are started and coordinated by the upper-level management of a company. Even when a red-tag campaign is companywide, local campaigns need to be organized in each department or production area. This involves

□ organizing a team

□ Organizing supplies

□ Organizing a time or schedule to perform red-tagging

□ deciding a local-tag holding area

□ planning for disposal of red-tagged items

Step 2: Identify red-tag targets

There are two red-tag targets:

a) Items: in the manufacturing area items like inventory (warehouse and in-   process inventory), equipment, and space are targets for red tags. Warehouse inventory include material, parts, products etc.

b) Areas: It is better to define a smaller area and evaluate it well than to define a larger area and not be able to evaluate it fully in available time.
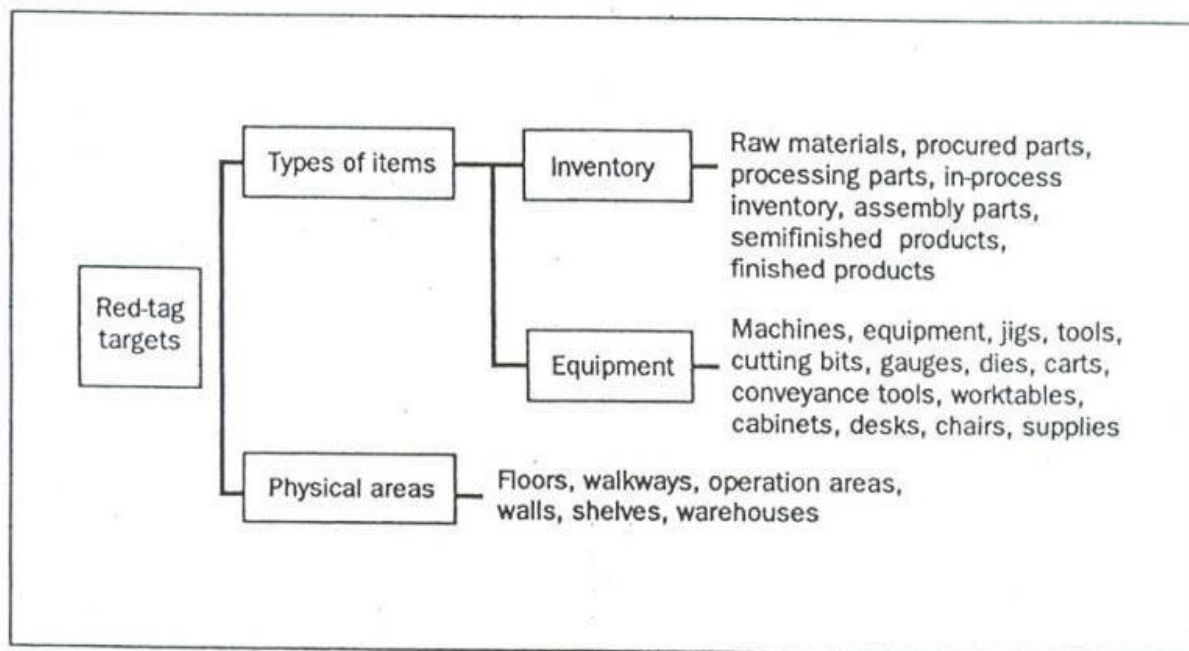

Figure 3-1. Identifying Red-Tag Targets

Step 3: Set red-tag criteria

As already mentioned, the most difficult thing about red-tagging is differentiating what is needed from what is not. This issue can be managed by establishing clear-cut criteria for what is needed in particular area and what is not. The most common criterion is the next month's production schedule.

☐ Items needed for that schedule are kept in that location.

☐ Items not needed for the schedule can be disposed of or stored in a separate location.

Three main factors determine whether an item is necessary or not. These factors are:

☐ The usefulness of the item to perform the work at hand. If the item isn't needed it should be disposed of.

☐ The frequency with which the item is needed. If it is needed infrequently it can be stored away from the work area.

☐ the quantity of the item needed to perform this work. If it is needed in limited quantity the excess can be disposed or stored away from the work area.

Each company must establish its own red-tagging criteria and each department may customize this standard to meet its local needs.

Step 4: Make red-tags

Each company has specific needs for documenting and reporting the movement, use, and value of materials, equipment, tools, inventory and products. The company's red tags should be designed to support this documentation process.

Various types of information on a red tag may include:

☐ Category: provides a general idea of the type of item (e.g., a warehouse item or machine). Categories include raw materials, in-process inventory, products, equipment, jigs, tools and dies.

☐ Item name and manufacturing number.

☐ Quantity: indicates the number of items included under this red tag.

☐ Reason: describes why a red tag has been attached to this item.

☐ Division: includes the name of the division responsible for managing the red-tagged item.

☐ Value: includes the value of the red-tagged item.

☐ Date: includes the red-tagging date.

Step 5: Attach the red tags

Clerical Work Support L – II	EIS CwS2TTLM 09 19V1 LG01	Author/Copyright: Federal TVET Agency	Version -1 Sept. 2019	Page 14 of 48

The best way to carry out red-tagging is to do the whole target area quickly, if possible, in one or two days. In fact, many companies choose to red-tag their entire factory during a one or two day period. Red-tagging should be a short and powerful event. You should red-tag all items you question, without evaluating what to do with them.

Step 6: Evaluate the red-tagged items

In this step, the red-tag criteria established in step 3 are used to evaluate what to do with red-tagged items. Options include:

☐ Keep the item where it is.

☐ Move the item to a new location in the work area.

☐ Store the item away from the work area.

☐ Hold the item in the local red-tag holding area for evaluation.

☐ Dispose of the item.

Disposal methods include:

☐ Throw it away.

☐ Sell it.

☐ Return it to the vendor.

☐ Lend it out.

☐ Distribute it to a different part of the company.

☐ Send it to the central red-tag holding area.

Step 7: Document the results of red-tagging

Each company or organization needs to create its own system for logging and tracking necessary information as red-tagging takes place. The documentation system may involve a written logbook in each department and in the central red tag holding area. Or it may involve entering data from the red-tags into a computer system. Whatever the system, documenting results is an important part of the red-tagging process. It allows the company to measure the improvement and savings produced as a result of the red-tagging effort. As it is indicated in step 4, the red-tags should be designed to support the documentation process.

Determine in advance approximately how many red-tags each workplace should use. An average of four red-tags per employee should be used. This means a workshop with 30 employees should need about 120 red tags. In addition when you find a shelf full of items which are difficult to decide, we don't have to be tempted to attach one red-tag for the whole shelf.

Because this can lead to confusion when we want to dispose of these items in the shelve. Therefore, avoid this temptation and attach individual tags to individual items.

When red-tagging is completed the factory or workshop is usually dotted with empty spaces – a sign of real progress. Then the layout of equipments and worktables can be changed to occupy the free space. Companies or organizations who think they need to build a new factory for a production of new products/ services should first apply the sort activity or the red-tag strategy so that they could get plenty of free space.

SET IN ORDER

There are some principles for deciding best locations for tools and equipments. Jigs, tools and dies differ from materials, equipments, machinery and parts in that they must be put back after each use. Some of the principles for jigs, tools and dies also apply to parts, equipments, and machinery. These are:

➢ Locate items in the workplace according to their frequency of use. Place frequently used items near the place of use. Store infrequently used items away from the place of use.

➢ Store items together if they are used together, and store them in sequence in which they are used.
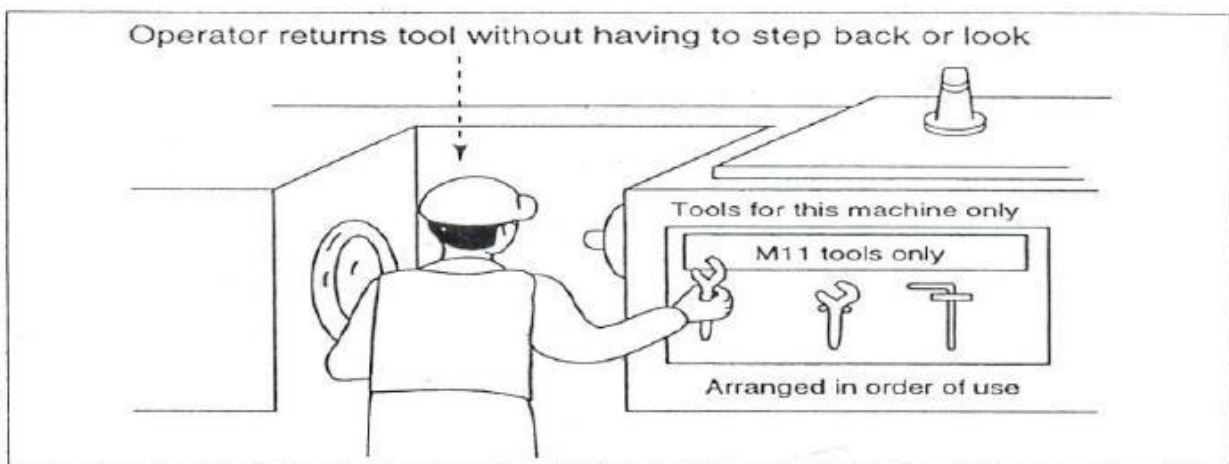

Figure: Tools kept at hand and stored in the order used.

- Device a "just let go" arrangement for tools. This approach involves suspending tools from a retractable cord just within reach so that they will automatically go back in to their correct storage position when released.
- Make storage places larger than the items stored there so that they are physically easy to remove and put back.
- Eliminate the variety of jigs, tools and dies needed by creating a few jigs, tools and dies that serve multiple functions.

Store tools according to function or product. Function-based storage means storing tools together when they have similar functions. This works best for job-shop production. Product-based storage means storing tools together when they are used on the same product. This works best for repetitive production. There are principles helpful in deciding the best locations for parts, equipments, and machinery, as well as tools by removing motion wastes. Motion wastes are unnecessary movements created when people move their trunks, feet, arms, and hands more than needed to perform a given operation. These wastes lead to waste of time, energy and effort. These motion wastes can be minimized by locating parts, equipments, and machinery in the best locations possible. More important than removing motion wastes is asking why it occurs. By asking 'why' we can find the methods of manufacturing that work and approach the zero-waste mark. Eliminating the unnecessary motions from existing operations is called *Motion improvement*. And finding ways to eliminate the whole operations to remove the wastes is called *Radical improvement*.

The principles that are helpful to eliminate or reduce motions that operators make are:

Principle 1: Start and end each motion with both hands moving at once.

Principle 2: Both arms should move symmetrically and in opposite directions.

Principle 3: Keep trunk motions to a minimum.

Principle 4: Use gravity instead of muscle.

Principle 5: Avoid zigzagging motions and sudden changes in direction.

Principle 6: Move with a steady rhythm.

Principle 7: Maintain a comfortable posture with comfortable motions.

Principle 8: Use the feet to operate on and off switches for machines where practical.

Principle 9: Keep materials and tools close and in front.
Principle 10: Arrange materials and tools in the order of their use.

Principle 11: Use inexpensive methods for feeding in and sending out materials.

Principle 12: Stand at a proper height for the work to be done.

Principle 13: Make materials and parts easy to pick up.

Principle 14: Make handles and grips in efficient, easy-to-use shapes and positions.

Evaluating current locations and deciding best locations

The 5S Map is a tool that can be used to evaluate current locations of parts, jigs, tools, dies, equipment, and machinery, and to decide best locations. 5S Map involves creating two maps 'before map' and 'after map'. The 'before map' shows the layout of the workplace before implementing set in order. The 'after map' shows the workplace after implementing set in order. The 5S Map can be used to evaluate the locations in a small or large workplaces, like in a single workstations, on a production line, or in a department.

The steps of using the 5S Map

1. Make a floor plan or area diagram of the workplace you wish to study. Show the location of specific parts, inventory, tools, jigs, dies, equipment and machinery.

2. Draw arrows on the plan showing the work flow between items in the workplace. There should be at least one arrow for every operation performed. Draw the arrows in the order that the operations are performed, and number them as you go.

3. Look carefully at the resulting "spaghetti diagram". Can you see places where there is congestion in the work flow? Can you see ways to eliminate waste?

4. Make a new 5S Map to experiment with a better layout for this work place. Again, draw and number arrows to show the flow of operations performed.

5. Analyze the efficiency of the new layout (the after map), based on the principles explained in the above.

6. Continue to experiment with possible layouts (after maps) using the 5S Map until you find one which you think will work well.

7. Implement this new layout in the work place by moving parts, tools, jigs, dies, equipment, and machinery to their new locations.

8. Continue to evaluate and improve the layout in the workplace

SHINE

Shine activities should be taught as a set of steps and rules that employees learn to maintain with discipline.

Step 1: Determine shine target areas

Shine target areas are grouped in to three categories: warehouse item, equipments and space. *Warehouse items* include raw materials, procured subcontracted parts, parts made in-house, and assembly components, semi-finished and finished products. *Equipment* includes machines, welding tools, cutting tools, conveyance tools, and general tools, measuring instruments, dies, wheels and casters, worktables, cabinets, desks, chairs and spare equipment. *Space* refers to floors, work areas, walkways, walls, pillars, ceilings, windows, shelves, closets, rooms and lights.

Step 2: Determine Shine Assignments

Workplace cleanliness is the responsibility of everyone who works there. Each employee should be assigned specific area to clean. To do this two methods can be used:

❖ A 5S Assignment Map – shows all the target areas for shine activity and who is responsible for cleaning them. By marking on 5S Map, the shine assignments can be shown.

❖ A 5S schedule – shows in detail who is responsible for cleaning which areas on which days and times of the day. Then this schedule should be posted in the work area.

Step 3: Determine shine methods

❖ Shine activities should be a natural part of the daily work. Shine activities and inspection should be done before a shift starts, during work time and at the end of the shift.

❖ Determining shine methods include:

❖ *Choosing targets and tools* – define what will be cleaned in each area and what supplies and equipments will be used.

Performing the five-minute shine – cleaning should be practiced daily and should not require a lot of time.

❖ *Creating standards for shine procedures* – people need to know what procedures to follow in order to use their time efficiently. Otherwise, they are likely to spend most of their time getting ready to clean.

Step 4: prepare tools

The cleaning tools should be placed properly or set in order where they are easy to find, use and return.

Step 5: Start to shine

When implementing the shine procedures, consider the following suggestions:

- Be sure to sweep dirt from floor cracks, wall corners, and around pillars.
- Wipe off dust and dirt from walls, windows, and doors.
- Be thorough about cleaning dirt, scraps, oil, dust, rust, cutting shavings, sand, paint, and other foreign matter from all surfaces.

Use cleaning detergents when sweeping is not enough to remove dirt.

1.2 Inspection

As discussed earlier, it is natural to do a certain amount of inspection while implementing shine activities. Once daily cleaning and periodic major cleanups become a habit, we can start incorporating systematic inspection procedures in to the shine procedures. Even when equipment in the workplace appears to function normally, it may be developing many problems. Always when machines or other equipment begin to show sign of minor, sporadic malfunctions, the operators not the maintenance people notice it first. Therefore, it is important to consider the operators information about the equipment.

1.2.1 Inspection steps

The steps of inspection and shine procedures are parallel. But the steps of inspection give greater emphasis on the maintenance of machines and equipment. These steps are:

Step 1: Determine inspection targets

The targets for inspection are similar to the targets of shine activities. These include machines, equipments, jigs, dies, cutting tools and measuring instruments.

Step 2: Assign inspection activities

In principle, the people who carry out inspection on a particular machine should be the same people who operate the machine. But most often one person can operate several machines at a

time (as in multi-process handling). In this case, it is good to involve line supervisors and group leaders in the inspection duties. Once inspection activities are assigned, they have to be written up on a large signboard for the workshop or on small signboards that are attached to each target machine.

Step 3: Determine inspection methods

First all of the items to be inspected should be listed then an inspection checklist should be prepared based on the listed inspection items. The following shows an example of an inspection checklist.

Step 4: Implement inspection

When implementing inspection, use all your senses to detect abnormalities. Inspection is not simply a visual activity. There are some ways to detect abnormalities. These are:

- Look closely at how the machine works and watch for slight defects (e.g. oil leakage, debris scattering, deformation, wear, warping, mold, missing items, lopsidedness, inclinations, color changes).
- Listen closely for changes in the sounds the machine makes while operating (e.g. sporadic sounds, odd sounds).
- Use your nose to detect burning smells or other unusual odours (e.g. burning rubber)
- Touch the machine where it is safe during operation and during downtime to detect deviations from normal conditions (e.g. strange vibrations, wobbling, looseness, excessive heat, shifting).

Step 5: Correct equipment problems

All equipment abnormalities or slight defects should be fixed or improved. There are two approaches to do these:

Instant Maintenance: whenever possible, an operator should immediately fix or improve a problem he or she discovers during inspection. But the operators should know what level of maintenance work they can handle by themselves and immediately.

Requested Maintenance

In some cases, a defect or problem may be difficult for the operator to hand alone and immediately. In this situation, the operator should attach a maintenance card to the site of the problem in order to make it visible. He or she can also issue a maintenance kanban to request help from the maintenance department. It is also good to log requested maintenance on to a

Work Manual Self-Check 3	Written Test

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

1. Describe 3S (1 point)
2. What is red tagging? (1 point)
3. Describe red tag holding area. (1 point)
4. List steps in red tagging? (7 points)
5. Describe steps to set in order. (5 points)
6. What is motion economy? (5 points)
7. List principles that helps to reduce motion (7 points)
8. List steps to shine activities. (5 points)
9. List types of problems frequently exist in factories. (4 points)
10. Describe shine targets. (5)
11. Describe steps in cleaning/inspection. (4 points)

Score =--

Rating:---

Name: _____   Date: _____

1.1 Implementation

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                          │     Preparation     │
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              ┌─────────────────────┴─────────────────────┐
              ▼                                            ▼
   ┌────────────────────┐                      ┌────────────────────────┐
   │  Necessary items   │                      │   Unnecessary items    │
   └─────────┬──────────┘                      └───────────┬────────────┘
             ▼                                              ▼
   ┌────────────────────────┐                  ┌────────────────────────┐
   │ Making a Shop Stock List│                  │    Red Tag Strategy    │
   └─────────┬──────────────┘                   └───────────┬────────────┘
             ▼                                              ▼
   ┌────────────────────┐                      ┌────────────────────────┐
   │   Quantification   │                      │ Evaluation of unnecessary│
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   │ Set-in-order activities │                  ┌────────────────────────┐
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                                                 │ Shine Activity In parallel│
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                                                 │  Set-In-Order activity │
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2. Set in order
2.2 Implementation stage

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┌─────────────────────────────────────────┐
│   Set targets for Set-In-Order Activity  │
└─────────────────────────────────────────┘
                    ⇩
┌─────────────────────────────────────────┐
│  Decision of location, Storage, Indication method │
└─────────────────────────────────────────┘
                    ⇩
┌─────────────────────────────────────────┐
│  Preparation of tools for Set-In-Order Activity │
└─────────────────────────────────────────┘
                    ⇩
┌─────────────────────────────────────────┐
│   Decision of schedule and work allocation │
└─────────────────────────────────────────┘
                    ⇩
┌─────────────────────────────────────────┐
│      Implementation of Set-In-Order       │
└─────────────────────────────────────────┘
```

3. Shine

3.2 Implementation

```
┌─────────────────────────────────────────┐
│         Determine shine target area       │
└─────────────────────────────────────────┘
                    ⇩
┌─────────────────────────────────────────┐
│        Determine shine assignments        │
└─────────────────────────────────────────┘
                    ⇩
┌─────────────────────────────────────────┐
│         Determine shine methods           │
└─────────────────────────────────────────┘
                    ⇩
┌─────────────────────────────────────────┐
│       Preparing proper tools for shine    │
└─────────────────────────────────────────┘
                    ⇩
┌─────────────────────────────────────────┐
│              Start to shine               │
└─────────────────────────────────────────┘
```

LAP Test	Practical Demonstration

Name: _____ Date: _____

Time started: _____ Time finished: _____

Instructions: Given necessary templates, workshop, tools and materials you are required to perform the following tasks within ------ hours.

Task 1: identify and prepare tools and techniques to the sort activities.

Task 2: identify and prepare tools and techniques to the set in order activities.

Task 3: identify and prepare tools and techniques to the shine activities.

Task 4: using the identified, prepared and given tools and techniques perform 3S to your/ the given work area.

- identify the:
  - ✓ person -in-charge
  - ✓ technology workshop
  - ✓ work station
- consider the:
  - ✓ OHS procedures
  - ✓ workplace procedures and standards (work area)
  - ✓ frequency of maintenance activities

Instruction Sheet	LG42: Standardize 3S

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

- The 4th pillar explanation and how to implement standardize.
- Tools and techniques required to standardize 3s.

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 –

- Prepare plan for the implementation of standardize
- Prepare and use tools and techniques to standardize 3s
- Report results
- Review standardization

Learning Instructions:

1. Read the specific objectives of this Learning Guide.

2. Follow the instructions described in number 3 to 13.

3. Read the information written in the "Information Sheets 1". Try to understand what are being discussed. Ask you trainer for assistance if you have hard time understanding them.

4. Accomplish the "Self-check 1" in page 6.

5. Ask from your trainer the key to correction (key answers) or you can request   your trainer to correct your work. (You are to get the key answer only after you finished answering the Self-check 1).

6. If you earned a satisfactory evaluation proceed to "Information Sheet 2". However, if your rating is unsatisfactory, see your trainer for further instructions or go back to Learning Activity #1.

7. Submit your accomplished Self-check. This will form part of your training portfolio.

8. Read the information written in the "Information Sheet 2". Try to understand what are being discussed. Ask your trainer for assistance if you have hard time understanding them.

9. Accomplish the "Self-check 2" in page 24.

10. Ask from your trainer the key to correction (key answers) or you can request your trainer to correct your work. (You are to get the key answer only after you finished answering the Self-check 2).

11. If you earned a satisfactory evaluation proceed to "Operation Sheet 1" in page 27. However, if your rating is unsatisfactory, see your trainer for further instructions or go back to Learning Activity #1.

12. Read the "Operation Sheet 1" and try to understand the procedures discussed.

13. Do the "LAP test" in page 28 (if you are ready). Request your trainer to evaluate your performance and outputs. Your trainer will give you feedback and the evaluation will be either satisfactory or unsatisfactory. If unsatisfactory, your trainer shall advice you on additional work. But if satisfactory you can proceed to Learning Guide #3.

Information Sheet 1	**The 4th Pillar Explanation and How to Implement Standardize**

Definition of the Fourth Pillar

Standardize, the fourth pillar of our visual workplace, differs from Sort, Set in Order, and Shine. This is because it is the method- you use to maintain the first three pillars of 5S. Building on this definition, we may define Standardize the result that exists when the first three pillars-Sort, set in order and Shine-are properly maintained.

Benefits from Standardize

1. Lead to workplace standardization

- prevent setbacks in the first three pillars
- Make implementing them a daily habit
- Ensure that all the three pillars are maintained in their fully implemented state.

2. Lead to work standardization

- Muda elimination
- Quality improvements
- Cost improvements
- Delivery time improvements

- Process improvements

Here are some of the problems that result when we do not implement Standardization well:

- Conditions go back to their previous and undesirable levels even after a companywide 5S implementation campaign.
  - At the end of the day, piles of unneeded items are left from the day's production and lie scattered around the production equipment.
  - Tool storage sites become disorganized and must be put back in order at the end of the day.
  - Cutting shavings constantly fall on the floor and must be swept up.
  - Even after implementing Sort and Set in order, it does not take long for office workers to start accumulating more stationery supplies than they need.

These problems and others reveal backsliding in gains made from implementing Sort Set in Order, and Shine Activities. The basic purpose of the Standardize pillar is to prevent setbacks in the first three pillars, to make implementing them a daily habit, and to make sure that all three pillars are maintained in their fully implemented state.

How to Implement Standardize

The three steps to making Sort, Set in Order and Shine activities (the three pillars or 3S) a habit are:

Step 1: Decide who is responsible for which activities with regard to maintaining 3S conditions.

Step 2: To prevent backsliding, integrate 3S maintenance duties in to regular work activities.

Step 3: Check on how well 3S conditions are being maintained.

As you read this section, you will discuss some of the tools for implementing Standardize of the Sort, Set in Order, and Shine activities. This is because in order to standardize we must use these same tools in a more systematic way to make sure that the first three pillars are maintained

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

1. Define the fourth pillar of 5S? (2 point)

2. Describe the benefits from standardize. (5 points)

3. What by mean standardize leads to work standardization? (5 points)

4. List problems that avoided by implementing standardize activities (10 points)

5. What are the three steps to making the 3S a habit? (8 points)

Answer sheet

Score = _____

Rating: _____ _____

Name: _____ Date: _____

- 5S Job Cycle Charts
- Visual 5S
- The Five Minute 5S
- Standardization level checklist
- 5S checklist
- The five Whys and one How approach(5W1H)
- Suspension
- Incorporation
- Use Elimination

The Three Steps to Make the 3S Activities a Habit/Standardize using the Tools and Techniques of 3S Standardization

1. Assign 3S Responsibilities

When it comes to maintaining three pillar conditions, everyone must know exactly what they are responsible for doing and exactly when, where and how to do it. If people are not given clear 3S job assignments based on their own workplaces, the Sort, Set in Order, and Shine activities will not have much meaning. Similarly, clear 3S instructions must be given to the people who deliver goods from outside suppliers. The delivery sites should be clearly marked and a 5S Map posted to show where each supplier's goods are to be unloaded. At each unloading site, signboards should make it clear whose things go where and in what amount. The suppliers should be made responsible for maintaining 3S conditions at their own unloading sites and encouraged to join in full 5S implementation.

Tools for assigning 3S responsibilities include:

- ➢ 5S Maps
- ➢ 5S schedules
- ➢ 5S job cycle charts, which list the 5S jobs to be done in each area, and set frequency cycle for each job (see the figure below). In the example shown in the figure below, 5S duties are sorted out according to the first three pillars and the scheduling cycle. In the figure, code letters are used for the various cycle periods:

A is for 'continuously," B for "daily (mornings)," C for "daily (evenings), " D for "weekly," E for "monthly" and F for "occasionally." Each 5S job assignee can then use these charts as 5S

Checklists. This particular example shows clearly who is responsible for each job, which area, what to do, and when to do it.

2. Integrate 3S Duties into Regular Work Duties

If people carry out three pillar maintenance duties only when they see three pillar conditions slipping, then the five pillar implementation has not yet taken root. Maintenance must become a natural part of everyone's regular work duties. In other words, the five pillars -centered on maintaining 3S conditions-must be part of the normal work flow. We sometimes refer to this as "5S line integration" or establishing a five pillars flow. Visual 5S and Five-Minute 5S are two approaches that help make maintenance work part of the everyday work routine.

The Concept of Prevention

When we find that tools have not been put back correctly, we immediately take care of them. When we find an oil puddle on the floor, we immediately mop it up. Making these actions habit is the foundation of Standardize. However, when the same problems keep on happening over and over again, it is time to take the concept of Standardize to the next level: prevention.

To take this pillar to a higher level, we must ask "why?" Why do unneeded items accumulate (despite Sort procedures)? Why do tools get put back incorrectly (despite Set in order procedure? Why do floors get dirty (despite Shine procedures)? When we ask "why" repeatedly, we eventually find the source of the problem and can address that source with a fundamental improvement. Such improvements can help us develop Unbreakable standardization, which means:

- Unbreakable sorting
- Unbreakable setting in order
- Unbreakable setting shining

Prevent unneeded items from Accumulating (Preventive Sort Procedures)

The Red-Tag Strategy described sorting out unneeded items. This strategy is a visual control method that enables anyone to see at a glance which items are no longer needed. However, we should note that the Red-Tag Strategy is an after-the-fact approach that deals with unneeded items that have accumulated. No matter how often we implement this strategy, unneeded items will accumulate in the interim.

Nowadays, smart companies are shifting from this type of "alter the-fact" sorting to preventive sorting. Preventive sorting means that instead of waiting until unneeded items accumulate; we

find ways to prevent their accumulation. We could also call this approach "unbreakable' sorting because once sort procedures have been implemented, having only needed items in the workplace becomes an "unbreakable" condition.

To achieve unbreakable sorting we must prevent unneeded items from even entering the workplace. These words- «only what is needed" -have a familiar ring to anyone acquainted with the just-in- time (JIT) philosophy and program. To prevent the accumulation of unneeded inventory, we must find a way to procure and produce only those materials that are needed, only when they are needed, and only in the amount needed.

Prevent Things from Having to Be Put Back (Preventive Set in Order Procedures)

Preventive setting in order means keeping set in order procedure from breaking down. To achieve preventive setting in order, we must somehow prevent the inefficiency that results from the lack of orderly control of any specific item. There are two ways to do this: (1) make it difficult to put things in the wrong place and (2) make it impossible to put things in the wrong place.

The first method relies heavily on discipline and visual controls. Clearly marked storage sites show at a glance what goes where and in what amount. When it is obvious what goes where and in what amount. When it's also prove that obviously that things are not put back properly. As people practice returning things, such visual setting in order becomes habitual. This condition supports setting in order that is difficult to break. However, there is still a big difference between setting in order that is difficult to break and setting in order that is unbreakable. 'Why settle for the first when the second is possible? But how we achieve unbreakable setting in order?

The 5 Whys and 1How (5W1H) Approach

We begin by asking "why?" until we identify the underlying causes- for every answer we gel we must ask "why" again. Usually we ask "why" at least five times to get to the root of the problem. When we do find the underlying cause, we ask "how" we call fix it. Accordingly, this method is called the "5W1H' approach.

When we ask "why" setting in order is breakable, we find that one answer is because people make mistakes putting things back. At this point, we need to identify what types of items are not being returned correctly. Once we identify this, the question is how to achieve unbreakable setting in order by making it impossible to return them to the wrong place. If we can somehow eliminate the need to return items at all, we can achieve unbreakable setting in order.

Three techniques for doing this are:

- Suspension
- Incorporation
- Use elimination

Suspension

In the Suspension technique, tools are literally suspended from above, just within reach of the user. Figure above shows this method in practice. Here a weighted pulley device is used to suspend tools from an overhead rack. When the operator finishes using the tool, he merely releases it and it automatically returns to its proper storage place.

While this technique does not eliminate the need to return items to a specific place, it does effectively eliminate the need for people to return them. People may make mistakes in returning things, but suspension devices do not. This technique achieves unbreakable setting in Order.

Incorporation

Incorporation means creating a flow of goods or operations in a factory process in which (1) jigs, tools, and measuring instruments are smoothly integrated into the process and (2) such devices are stored where they are used and therefore do not have to be returned after use. The figure below shows an example where a measuring gate has been incorporated into a cutting process for an automobile part. The measuring gate catches any pieces that have not been machined to the correct height. This measuring procedure is an example of "mistake-proofing" (or poka-yoke). The incorporation of the measuring gate into the cutting process means that its storage place is also its place of use. It is therefore used (for full-lot inspection) without having to be put back anywhere.

Use Elimination

Suspending or incorporating jigs, tools, or measuring instruments effectively eliminates the need to return them after each use. However, these items are still being used. The question is whether there is some way to serve the function of the tool without using the jig, tool or measuring instrument. A set in order approach that eliminates the use of a particular jig, tool or measuring instrument is in fact unbreakable setting in order.

There are three techniques for eliminating the use of certain tools:

- o Tool unification

- Tool substitution
- Method substitution

Tool unification

Tool unification means combining the functions of two or more tools into a single tool. It is an approach that usually reaches back to the design stage. For example, we can reduce the variety of die designs to unify dies or make all fasteners that require a screw-driver conform to the same kind of screw-driver, flat-tip or Phillips.

Tool substitution

Tool substitution means using something other than a tool to serve the tool's function, thereby eliminating the tool. For example, it is sometimes possible to replace wrench-turned bolt with hand-turned butterfly-grip bolts, thereby eliminating the need for a wrench.

Method substitution

If we substitute ordinary wrench-turned bolts with hand-turned butterfly-grip bolts, we have eliminated the wrench, but we have not eliminated the method (bolt fastening).

Bolt fastening is just one way to fasten things. Fastening pins, clamps and cylinders can also be used for this purpose. *We* may find we can improve efficiency even more by replacing one method with another. This is "method substitution."

Prevent Things from Getting Dirty (Preventive Shine Procedures)

Preventives shine Procedures will prevent things from getting dirty to begin with. Anyone has participated in 5S implementation can tell you that the initial cleanup is very hard work. To minimize the drudgery of cleaning up, the key is to treat contamination problems at their source. The 5Why approach can be applied In figure out why dirt is being generated, and how this problem can be fixed. For example, instead of mopping up oil puddles, figure out where the oil is leaking from and repair the leak.

1. Question: Why mop the floor every day?

Answer: Because oil collects on the floor.

2. Question: does oil collect on the floor every day?

Answer: Because there's a leak from the drill press machine

3. Question: Why is there a leak from the drill press machine?

Answer: Because oil is leaking from a valve.

4. Question: Why is oil leaking from a valve?

Answer: Because it's broken.

5. Question: Why hasn't the valve been replaced?

Answer: because we didn't notice it was broken

6. Question: How can we coordinate getting the valve fixed?

Answer: The maintenance team will order the part and the operator will replace it.

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 result of implementing 3S without standardization? (4 points)

2. List at least five tools and techniques used to standardize the 3S.

3. What are the tools used to assign 3S responsibilities? (3 points)

4. How the 5 whys and 1 how (5W1H) approach are used to sustain the 3S? (6 points)

5. What is suspension in terms of sustaining of the 3S? (3 points)

6. Define incorporation. (3 points)

7. Describe Use Elimination in sustenance of the 3S. (3 points)

8. What will result implementing 3S without standardization? (4 points)

Score = _____

Rating: _____

Name: _____ Date: _____

Operation Sheet 1	Procedures in Implementing Standardize

Sequence of Standardize

1. Planning for Standardization

2. Assign 3S Responsibilities for everyone in the work place by using the tools by using the tools such as 5S Maps, 5S schedules, 5S job cycle charts

3. Integrate 3S Duties into Regular Work Duties by using the two approaches: visual 5S and five- minute 5S

4. Check on 3S Maintenance Level by using Standardization-level Checklist and 5S checklist and make maintenance/correction on back sliding the 3S.

5. Prevention of back sliding of the first three pillars by using 5W1H approach, suspension, incorporation and use elimination.

LAP Test	Practical Demonstration

Name: _____ Date: _____

Time started: _____ Time finished: _____

Instructions: Given necessary templates, workshop, tools and materials you are required to perform the following tasks within -------- hours.

Task 1: Prepare standard to the sort activities in your workplace.

Task 2: Prepare standard to the set in order activities in your workplace.

Task 3: Prepare standard to the shine activities in your workplace.

- ❖ consider the:
  - ➢ OHS procedures

Instruction Sheet	**LG43: Sustain 3S**

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

❖ The fifth pillar explanation and how to implement sustain.

❖ Tools and techniques to sustain 5s

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 –

✓ Prepare plan for the implementation of sustain

✓ tools and techniques used to sustain 3s

✓ Review sustain

Learning Instructions:

1. Read the specific objectives of this Learning Guide.

2. Follow the instructions described in number 3 to 13.

3. Read the information written in the "Information Sheets 1". Try to understand what are being discussed. Ask you trainer for assistance if you have hard time understanding them.

4. Accomplish the "Self-check 1" in page 11.

5. Ask from your trainer the key to correction (key answers) or you can request your trainer to correct your work. (You are to get the key answer only after you finished answering the Self-check 1).

6. If you earned a satisfactory evaluation proceed to "Information Sheet 2". However, if your rating is unsatisfactory, see your trainer for further instructions or go back to Learning Activity #2.

7. Submit your accomplished Self-check. This will form part of your training portfolio.

Information Sheet-1	The Fifth Pillar Explanation and How to Implement Sustain

The fifth pillar is Sustain. In the context of the five pillars, to sustain means to make a habit of properly maintaining correct procedures. In your life in general, what do you mean when you talk about sustaining something? Usually, you think of it as drawing on something from inside yourself in order to maintain a course of action-even when forces in your life challenge in this effort.

❖ *Means making a habit of properly maintaining correct procedures*

Problems Avoided by Implementing Sustain

Here are some of the things that happen in a company when Commitment to the five pillars is not sustained.

1. Unneeded items begin piling up as soon as sorting is completed

2. No matter how well Set in Order is planned and implemented, tools and jigs do not get returned to their designated place after use.

3. No matter how dirty equipment becomes, little or nothing is done to clean it.

4. Terms are left protruding into walkways, causing people to trip and get injured.

5. Dirty machines start to malfunction and produce defective goods.

6. Dark, dirty, disorganized workplaces lower workers' morale.

These 5S related problems and others are likely to occur in any factory or office that lacks a commitment to sustain the five pillar gains over time

Why Sustain Is Important

Usually you commit yourself to sustain a particular course of action because the rewards for keeping to the course of action are greater than the rewards for departing from it (see figure above). Viewed another way, the consequences of not keeping to the course of action may be greater than the consequences of keeping to it. For example, suppose you want to start an exercise program –say you decide you want to work out at a gym three times a week. You probably have difficulty sustaining this course of action. This is because forces in your life, such as limits on your time and energy as well as the power of inertia, challenge this plan. However, if the rewards of sticking to your exercise program (for example, feeling and looking better) are

greater than the rewards of not sticking to it (for example, having more time for other things that you need to do), your commitment will increase and you will probably sustain this program over lime

How to Implement Sustain

Creating Conditions to Sustain Your Plans

The implementation of the sustain pillar is different from that of the sort, set in order, shine, or standardize pillars in that the results are not visible and cannot be measured. Commitment to it exists in people's hearts and minds and only that have shows its presence. Because of this it cannot exactly be "implemented" like a technique, However, we can create conditions that encourage the implementation of the sustain pillar.

For instance, going back to our exercise program example, how could you create conditions in your own life that would encourage sustaining your plan to work out at a gym three time a week? You might:

o   Join a gym with a friend so you can work out together and encourage each other (see Figure above).

o   Create a workout schedule with your friend.

o   Make a plan with your spouse to eat dinner later three nights a we so you can go to the gym after work.

o   Get extra sleep on the nights before you work out, so that you will not be too tired by the end of the day to follow through with your exercise plan.

These conditions would make it easier for you to sustain your schedule for exercising at the gym three times a week.

Similarly, you and your company can create conditions or structure that will help sustain to the five pillars. The types of conditions that are most useful for this are:

o   **Awareness.** You and your coworkers need to understand what the five pillars are and how important it is to sustain them.

o   **Time.** You need to have or make enough time in your work schedule to perform 5S implementation.

o   **Structure.** You need to have a structure for how and when 5S activities will be implemented.

o **Support.** You need to ha e support for your efforts from management in terms of acknowledgement, leadership, and resource

o **Rewards and Recognition.** Your efforts need to be rewarded.

o **Satisfaction and Excitement.** The implementation of the five pillars needs to be fun and satisfying for you and the company. This excitement and satisfaction gets communicated from person to person, allowing 5S implementation to build as it involves more people.

Self-Check 1	Written Test

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

1. Define the fifth pillar of 5S? (2 point)

2. List problems avoided by implementing sustain. (6 points)

3. Why sustain is important? (4 points)

4. Explain how to implement sustain? (7points)

5. What are the roles of you and your management in implementation of sustain? (9points)

Name: _____   Date: _____

Score =_____

Rating _____

Information Sheet-2	Tools and techniques to sustain 5s

Common Tools and techniques to sustain 5s are:

There are many tools and techniques your company can use to help sustain commitment to 5S implementation. We offer these below so you will be aware of them. At some point in your 5S implementation work, you may be called upon to use or even coordinate the use of these techniques. These are:

- 5S slogans
- 5S posters
- 5S photo exhibits & storyboards
- 5S newsletter
- 5S maps
- 5S pocket manuals
- 5S department/benchmarking tours
- 5S months
- 5S audit
- Awarding system
- Big cleaning day
- Patrolling system
- Top management Patrol
- 5S Committee members and Promotion office Patrol
- Mutual patrol
- Self patrol

☐ Checklist patrol

☐ Camera patrol

CRITERIA FOR 5S AUDIT RATING

Evaluation Scale	5S Practice	5S Theory	Data/Fact
1 (0 - 30 %)	• Nothing at all and no sense of commitment. • Not doing 5S at all.	• No knowledge and cannot explain.	• No data. • No improvement effort.
2 (31 – 50 %)	• Doing some but not sufficient. • Doing before auditors arrival.	• There is a knowledge but people do not know how to practice.	• There is data but superficial.
3 (51 – 70 %)	• Doing what is supposed to do but need to put more effort.	• Understand and have overall knowledge.	• Sufficient data but not in order.
4 (71 – 90 %)	• Almost ok, but not fully completed yet or insufficient.	• Almost ok, but in some are need further improve.	• Sufficient data and in order. • Able to explain.
5 (91 – 100 %)	• There is a proper evidence of 5S. • 5S culture can be seen.	• Completely YES	• Orderly stratified data. • Can show and answer immediately • Visual Control is functional.

Awarding System

- Awarding for 5S promotion results according to evaluation is recommended. Awards may be:
- For Good performance Award for efforts
- Award for good Ideas
- Prize winner
- Group
- Individual

SUMMARY

The fifth pillar, sustain, means to make a habit of properly maintaining correct procedures over time. No matter how well implemented the first for pillars are, the 5S system will not work for long without a commitment to sustain it.

In your life in general, why do you commit yourself to sustain a particular course of action? Usually you do this because the rewards of keeping to the course of action are greater than the rewards of not implementing them, sustaining them through the fifth pillar should be something you take to naturally.

Unlike the first four pillars, the sustain pillar cannot be implemented by a set of techniques, nor can it be measured. However, you and your company can create conditions or structures that will help sustain the commitment to 5S implementation.

To sustain 5S activities in your company, both you and the company management have important roles to play. Part of this role involves creating the conditions that sustain 5S activities. The other part involves demonstrating that you are committed to sustain these activities, too. Some of the tools to help sustain 5S activities in your company include: 5S Slogans, 5S Posters, 5S Photo Exhibits and Storyboards, 5S Newsletters 5S Months, 55 Pocket Manuals, 55 Department Tours, 55 Maps, and 5s Audit.

Self-Check 2	Written Test

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

1. What are the common tools and techniques to sustain 3S? (13 points)

2. How 5S slogans are used to sustain 3S? (2 points)

3. Why 5S photo exhibits and storyboards are used to implement sustain activities (3 points)

4. Describe 5S newsletters? (2 points)

5. What are the 5S pocket manuals? (3 points)

6. How 5S months are scheduled? (3 points)

7. Describe 5S audit. (4 points)

8. What are the activities performed during preparation of audit and during audit (4 points)

9. Why awarding is necessary in sustain implementation? (2 points)

10. List types of patrolling system. (6 points)

Note: **Satisfactory rating - 22 points Unsatisfactory - below 22 points**
You can ask you trainer for the copy of the correct answers

Score = _____

Rating: _____

Name: _____ Date: _____

Sequence of Sustain

1. Planning

   ➢ Set schedules for sustaining techniques

2. Prepare sustaining Tools and Techniques

3. Implement sustaining activities

4. Feedback comments on the sustain results

Name: _____ Date: _____

Time started: _____ Time finished: _____

Instructions: Given necessary templates, workshop, tools and materials you are required to perform the following tasks within ------ hours.

Task 1: Prepare slogans and posters for your work area.

Task 2: Evaluate your work place by using the 5S check list and use stickers.

Task 3: Prepare audit summary report by using the given template.

> ➢ identify the:
> ➢ person -in-charge
> ➢ technology workshop
> ➢ work station
> ➢ consider the:
> ➢ OHS procedures
> ➢ workplace procedures and standards (work area)
> ➢ frequency of maintenance activities

List of Reference Materials

- 5S for operators (1995)

- Journals/publications/magazines

- Reference Book

- Job specifications

- Safety Manual and Guide

- Learning Guide #3