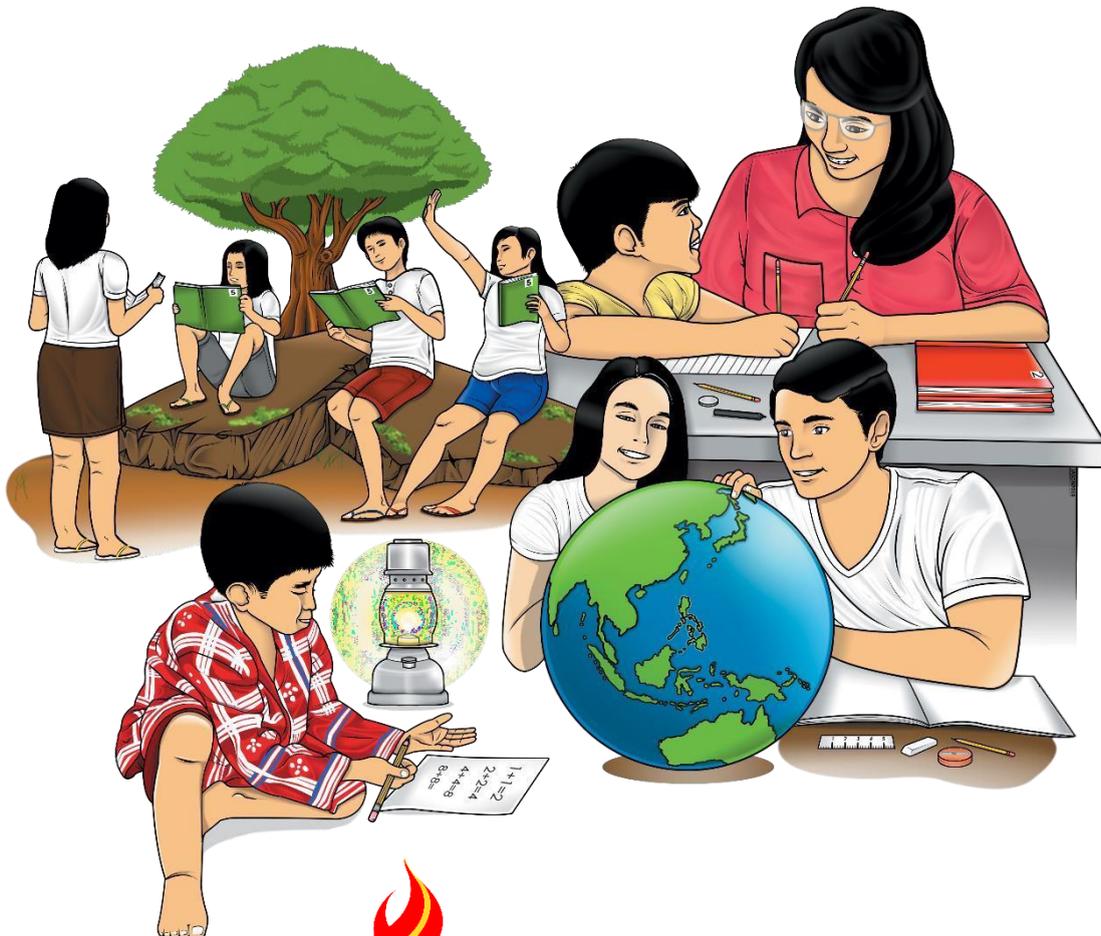


Technology and Livelihood Education

Industrial Arts– Module 11: The Principles of Five “S”



TLE – Grade 6
Alternative Delivery Mode
Industrial Arts – Module 11: The Principles of Five “S”
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Development Team of the Module

Writer :	Gerald V. Samson
Editors and Reviewers:	Jeanalyn L. Jamison, Ana Lee C. Bartolo, Petronilo R. Bartolo, Velly P. Seguisa, Ivy Dalisay
Illustrator:	Jofel D. Nolasco
Layout Artists:	Jofel D. Nolasco, Ana Lee C. Bartolo, Rynwalter A. Paa
Management Team:	Ramir B. Uytico, Pedro T. Escobarte, Jr. Neri Anne M. Alibuyog, Bernie L. Libo-on Elena P. Gonzaga, Donald T. Genine Melgar B. Coronel, Ana Lee C. Bartolo Jeanalyn L. Jamison

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Department of Education – Region VI - Western Visayas

Office Address: Duran St., Iloilo City
Telefax: (033) 509-7653/ (033) 336-2816
E-mail Address: region6@deped.gov.ph

Technology and Livelihood Education

Industrial Arts – Module 11: The Principles of Five “S”

Introductory Message

This Self-Learning Module (SLM) is prepared so that you, our dear learners, can continue your studies and learn while at home. Activities, questions, directions, exercises, and discussions are carefully stated for you to understand each lesson.

Each SLM is composed of different parts. Each part shall guide you step-by- step as you discover and understand the lesson prepared for you.

Pre-tests are provided to measure your prior knowledge on lessons in each SLM. This will tell you if you need to proceed on completing this module or if you need to ask your facilitator or your teacher's assistance for better understanding of the lesson. At the end of each module, you need to answer the post-test to self-check your learning. Answer keys are provided for each activity and test. We trust that you will be honest in using these.

In addition to the material in the main text, Notes to the Teacher are also provided to our facilitators and parents for strategies and reminders on how they can best help you on your home-based learning.

Please use this module with care. Do not put unnecessary marks on any part of this SLM. Use a separate sheet of paper in answering the exercises and tests. And read the instructions carefully before performing each task.

If you have any questions in using this SLM or any difficulty in answering the tasks in this module, do not hesitate to consult your teacher or facilitator.

Thank you.



What I Need to Know

This module was designed and written with you in mind. It is here to help you master the skills in recycling waste materials using the principles of Five “S”. The scope of this module permits it to be used in many different learning situations. The language used recognizes the diverse vocabulary level of students. The lessons are arranged to follow the standard sequence of the course. But the order in which you read them can be changed to correspond with the textbook you are now using.

This module focuses on the following topics:

- a. The five principles of Five “S”; and
- b. How each principle is implemented

After going through this module, you are expected to:

- a. Discuss each principle in relation to recycling waste materials.
(TLE6IA-0i-11)



What I Know

Matching Type:

Directions: Match the principles of Five “S” in column A with its appropriate English terms in column B. Write the letter of the correct answer on a separate sheet of paper.

A	B
_1. Seiri	a. sustain
_2. Shitsuke	b. sweep
_3. Seiketsu	c. sort
_4. Seiso	d. set in order
_5. Seiton	e. standardize
	f. sustain set

I. Multiple Choice

Directions: Read the questions below. Choose the letter of the correct answer and write it on a separate sheet of paper.

1. Which principle of Five “S” mean to identify and eliminate all unnecessary items from the workplace.
 - A. Seiri (Sort)
 - B. Seiso (Sweep)
 - C. Seiton (Systematize/ Set in order)
 - D. Seiketsu (Standardized)

2. What Principle of 5 “S” that says put all needed tools and materials and equipment in order they are to be used.
 - A. Seiri (Sort)
 - B. Seiso (Sweep)
 - C. Seiton (Systematize/ Set in order)
 - D. Seiketsu (Standardized)

3. Which principle means to clean the workplace thoroughly after service.
 - A. Seiri (Sort)
 - B. Seiso (Sweep)
 - C. Seiton (Systematize/ Set in order)
 - D. Seiketsu (Standardized)

4. Which principle will maintain high quality of cleanliness and orderliness in a workplace.
 - A. Seiri (Sort)
 - B. Seiso (Sweep)
 - C. Seiton (Systematize/ Set in order)
 - D. Seiketsu (Standardized)

5. Why should we practice 5 “S” in our workplace?
 - A. for cleanliness
 - B. for convenience
 - C. for efficiency and effectiveness
 - D. for sanitation

Lesson 1

The Principles of 5 “S”

One factor that a person will be able to work efficiently and effectively is the condition of the workplace. A systematic, clean and well-organized area is needed. Thus, it is very important for you to learn the principles of 5 “S”, so you can apply it in your daily work.



What's In

Directions: Read each question carefully, then write the letter of your choice on a separate sheet of paper.

1. Which of the following is a must in doing simple repair at home or in school?
 - A. clean the workplace
 - B. observe protocols
 - C. use imported tools
 - D. check the area of work
2. Before doing simple repair, we should check that our tools are _____ to prevent accidents caused by faulty tool.
 - A. in the toolbox
 - B. brand new
 - C. complete
 - D. in good condition
3. Which should be done to ensure that the tools and equipment used are in good working condition?
 - A. repair
 - B. prevention
 - C. inspection
 - D. storage
4. What is the importance of wearing personal protective equipment while working?
 - A. for help and assistance
 - B. for readiness and style
 - C. for environmental sanitation
 - D. for safety and protection
5. What caused overheating and fire on an electrical outlet?
 - A. the temperature of the room
 - B. cleaning the outlet
 - C. uninstal outlet
 - D. place near hot point



Notes to the Teacher

Please help the learner to better understand the terms being introduced. Lesson is easy to understand when they can comprehend these words.

The words below are defined according to their function in this module. Take time to familiarize them, it will help you on your journey in this module.

New Words to Learn

1. Principle – statement used as a guide to achieve something.
2. Sustain – to continue to do what has been successfully started.
3. Instill – to develop to someone little by little a good value as habit.
4. Eliminate – to remove something that is not needed.
5. Workplace – a place where work is done.
6. Clutters – something that scatter or not arrange properly.
7. Efficient – produce good result without wasting materials, time, money, and effort or energy.
8. Effective – producing desired output.
9. Systematic – doing things with careful system or method.



What's New

Previously we have learned the importance of using the proper tools in working simple electrical gadgets. Can you still recall some of these tools?

Can you still name some of the simple gadgets and furniture you can repair at home?

After doing some simple repairs at home on in school, what are we going to do with the materials that were not used.



Jofel D. Nolasco, an Office, 2019

Look at the illustration above, what have you observed with the picture?

Is it a good place to do your work or task?

In this module, you will learn the principles of 5 “S”. These principles will guide and will help you make your workplace ideal for work and yourself to become productive.



What is It

The Principle of 5 “S”

Five (5) “S” is very famous among Japanese as they are the first to advocate this principle. It aims to provide an ideal workplace by organizing and eliminating waste around the area. Nowadays, 5 “S” is observed in so many workplaces in the country. Some industrial workplaces, manufactories, private and public schools, offices, and hospitals. The principle of 5S has a great impact on the value formation of individual towards work and self-development.

What does 5 “S” represent?

5 “S” represents five Japanese words:

Seiri (Sort), Seiton (Systematize/Set in order), Seiso (Sweep), Seiketsu (Standardized), and Shitsuke (Sustain).

How do we implement these principles?

Seiri (Sort)

There are things in the workplace that seem to obstruct or distract the smooth flow of the work. These things need to be identified and taken away from the worksite for disposal, recycling, or safekeeping.

Seiri or sort is the principle that means to sort through all items in a location and removing all unnecessary items from the workplace.

Goals:

- Reduce time loss looking for an item by reducing the number of items.
- Reduce the chance of distraction by unnecessary items.
- Simplify inspection.
- Increase the amount of available, useful space.
- Increase safety by eliminating obstacles.

How to Implement Seiri (Sort):

1. Check all items in a location and evaluate whether their presence at the location is useful or necessary.
2. Remove unnecessary items as soon as possible. Place those that cannot be removed immediately in a 'red tag area' so that they are easy to remove later.
3. Keep the working floor clear of materials except for those that are in use to production.

Seiton (Systematize/Set in order)

Once the workplace has been cleared of unnecessary items, this principle will follow.

Seiton means setting all needed tools, materials, and equipment in the order they are to be used.

Having a safe storage area where you can arrange your tools is suggested. It helps you find things needed for your job and to keep them when not in use.

Another way to set things in order is by putting labels on your storage cabinets and shelves so it would be easy for you to find things you are looking for.

Furthermore, setting things in order to prevent loss and waste of time because it will allow you to find and pick items when needed.

Goal:

- Reduce time in finding and picking of items needed.

How to Implement Seiton (Systematize/Set in order)

1. Arrange workstations in such a way that all tool / equipment is in proximity. Place components according to their uses, with the frequently used components being nearest to the workplace.
2. Arrange all necessary items so that they can be easily selected for use. Make it easy to find and pick up necessary items.
3. Assign fixed locations for items. Use clear labels, marks or hints so that items are easy to return to the correct location and so that it is easy to spot missing items.

Seiso (Sweep)

Seiso or sweep means to clean the workplace thoroughly. When do we need to clean? Cleaning should be one daily or every after work.

Tools, machines, furniture, and other equipment should be cleaned from time to time to make them last for a longer period.

Also, it is very important to clean the workplace not only for the equipment but for the safety of the people working in the place as well.

Goals:

- Improves the production process efficiency and safety, reduces waste, prevents errors and defects.
- Keep the workplace safe and easy to work in.
- Keep the workplace clean and pleasing to work in.

How to implement Seiso (Sweep)

1. Clean the workplace and equipment daily or after working.
2. Inspect the workplace and equipment while cleaning.

Seiketsu (Standardized)

This principle aims to maintain high quality of cleanliness and orderliness.

The place of work should be free of clutters, dust, litters, stains on tables, counters, and equipment. It is also advisable to sanitize the tools and the workplace when needed.

Integral part of this principle is assigning specific task, responsibility and rules for the individual of the workplace, to be aware of their duties.

Goal:

- Establish procedures and schedules to ensure the repetition of the first three 'S' practices.

How to Implement Seiketsu (Standardized)

1. Develop a work structure that will support the new practices and make it part of the daily routine.
2. Ensure everyone knows their responsibilities in performing the sorting, organizing and cleaning.
3. Use photos and visual controls to help keep everything as it should be.
4. Review the status of 5S implementation regularly using audit checklists.

Shitsuke (Sustain)

This means to have self-discipline to instill the habit of cleaning. Every worker should make it a part of his/her everyday routine to clean and put things in order before, during and after work.

This final step seems to be the most difficult. Oftentimes, we fail to sustain what we have started. In order to achieve this, one needs to focus on standards of practice. Regular inspection and evaluation will help us sustain good practice.

Goal:

- Ensure that the 5S approach is followed.

How to Implement Shitsuke (Sustain)

1. Organize training sessions.

1. Perform regular audits to ensure that all defined standards are being implemented and followed.
2. Implement improvements whenever possible. Worker inputs can be very valuable for identifying improvements.
3. When issues arise, identify their cause and implement the changes necessary to avoid recurrence.



What's More

Activity 1: Classifying the Principle According to Ideas Presented

Learning the Skill: Classifying Ideas

Directions: Choose the principle inside the box that is best describe by each sentence below. Write your answer on a separate sheet of paper.

Seiri (Sort)
Seiton (Systematize/Set in order)
Seiso (Sweep)
Seiketsu (Standardized)
Shitsuke (Sustain)

1. Instill the habit of cleaning.
2. Identify and eliminate unnecessary items.
3. Put all needed materials in order.
4. Clean the workplace thoroughly after service.
5. Maintain high quality of cleanliness and orderliness.

Activity 2: Understanding the words better

Learning the Skill: Defining a word through scrambled letters

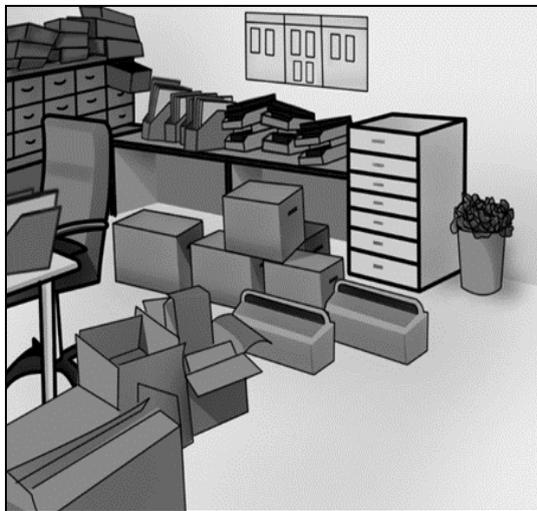
Directions: There are scrambled letters before each item. Read the sentence that defines the word and arrange the scrambled letters to form the correct word described by each sentence. Write your answer on a separate sheet of paper.

olga	1. This refers to the aim or objective.	
listiln	2. This word means, to develop to someone little by little a good value as a habit.	
antisus	3. To continue to do what has been successfully started.	
scultter	4. Something that scatters or not arranged properly.	
cienteffi	5. Produce a good result without wasting materials, time, money, effort or energy.	
creakplow	6. A place where work is done.	
efectfive	7. Producing desired output.	
actisystem	8. Doing things with careful system or method	
incripple	9. Statement used as a guide to achieve something	
inatemile	10. This means to remove something that is not needed.	

Activity 3: Understanding the words better

Learning the Skill: Comparing and contrasting two objects

A



B



Directions: Do the activity below. Write your answer on a separate sheet of paper.

1. Look at the illustrations above.
2. Between the two illustrations, which do you think is an ideal workplace?
3. Why do you think that it is an ideal workplace? Give at least three (3) reasons for your answer based on what you have learned from this module.



What I Have Learned

Directions: Try to recall what you have learned and complete each statement below and write your answer on a separate sheet of paper.

1. _____ is a principle famous among Japanese.
2. 5's stands for five Japanese words which are; _____, _____, _____, _____, and _____.
3. The objective of 5's principle is to provide enough space to work _____ and _____.



What I Can Do

1. Together with your parents or guardians, (for safety) try to visit a workplace or an industrial shop in your community and check the present situation.
2. Observe if the present situation the principle of 5 “S” is properly implemented.
3. Through your observation, try to formulate recommendations based on the principle of 5 “S”.



Assessment

Directions: Read the test items below. Choose the letter of the correct answer and write it on a separate sheet of paper.

1. Which of the principles of Five “S” below will improve production process efficiency and safety, reduces waste, prevents errors and defects?
 - A. Seiri (Sort)
 - B. Seiso (Sweep)
 - C. Seiketsu (Standardized)
 - D. Seiton (Systematize/ Set in order)
2. What is the ultimate goal of Seiketsu?
 - A. To simplify inspection.
 - B. To establish procedures.
 - C. To keep the workplace safe and easy to work in.
 - D. To ensure that the 5 “S” approach is followed.
3. Which principle of Five “S” that one achieved standard of practice?
 - A. Seiri (Sort)
 - B. Seiso (Sweep)
 - C. Shitsuke (Sustain)
 - D. Seiton (Systematize/ Set in order)

4. Which activity can be done under Seiton or Systematize?
 - A. Remove unnecessary items.
 - B. Cleaning the workplace.
 - C. Putting labels on storage cabinet.
 - D. Assigning specific tasks to individual workers.

5. What are needed in order to maintain standards inside the workplace?
 - A. A lot of workers
 - B. New tool and equipment
 - C. Cleanliness and safety
 - D. Regular inspection and evaluation

6. Why we should practice 5 “S” in our workplace?
 - A. for cleanliness
 - B. for convenience
 - C. for sanitation
 - D. for efficiency and effectiveness

7. One factor to increase productivity is to follow the_____.
 - A. 4 A’s
 - B. 3 R’s
 - C. 5 “S”
 - D. 3D

8. What characteristic does one need to possess in order to produce desired output?
 - A. skill
 - B. talent
 - C. efficiency
 - D. effectiveness

9. _____is to produce good result without wasting materials, time, money, and effort or energy.
 - A. skill
 - B. talent
 - C. efficiency
 - D. effectiveness

10. When do we need to practice 5 “S” in the workplace?
 - A. Once a week
 - B. Sometimes
 - C. Everyday
 - D. If you have time



Additional Activities

On a separate sheet of paper, copy the table below, check each principle based on the frequency they are to be applied in your own household.

Area in the house	Frequency of Applying 5 “S”		
	Daily	Weekly	Monthly
1. Kitchen			
2. Living Room			
3. Dining Room			
4. Garden			
5. CR			
6. Bed Room			
7. Laundry Room			
8. Backyard			
9. Garage			
10. Floor			



Answer Key

<p>What I Know</p> <p>I. Matching Type</p> <p>1. c</p> <p>2. a</p> <p>3. e</p> <p>4. b</p> <p>5. d</p> <p>II. Multiple Choice</p> <p>1. A</p> <p>2. C</p> <p>3. B</p> <p>4. D</p> <p>5. C</p> <p>What's In</p> <p>1. B</p> <p>2. D</p> <p>3. C</p> <p>4. D</p> <p>5. D</p>	<p>What's More</p> <p>Activity 1</p> <p>1. Shitsuke/Sustain</p> <p>2. Seiri/Sort</p> <p>3. Seiton/Set in Order</p> <p>4. Seiso/Sweep</p> <p>5. Seiketsu/Standardized</p> <p>Activity 2</p> <p>goal</p> <p>instill</p> <p>sustain</p> <p>chutters</p> <p>efficient</p> <p>workplace</p> <p>effective</p> <p>systematic</p> <p>principle</p> <p>eliminate</p> <p>Activity 3</p> <p>Answers may vary</p>	<p>What's I Have Learned</p> <p>5's</p> <p>Seiri</p> <p>Seiton</p> <p>Seiso</p> <p>Seiketsu</p> <p>Shitsuke</p> <p>Efficiency and</p> <p>effectively</p>	<p>Assessment</p> <p>1. B</p> <p>2. C</p> <p>3. C</p> <p>4. C</p> <p>5. D</p> <p>6. D</p> <p>7. C</p> <p>8. D</p> <p>9. C</p> <p>10. C</p>
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<p>What's In</p> <p>1. B</p> <p>2. D</p> <p>3. C</p> <p>4. B</p> <p>5. D</p>	<p>Additional</p> <p>Activities</p> <p>Note:</p> <p>The teacher will facilitate checking.</p> <p>Answers may vary.</p>
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References

A. Books/References

Department of Education Curriculum Guide 2016, EPP 6, Industrial Arts pages 38 – 41

Department of Education MELCs in EPP/TLE Grade 6 Industrial Arts pages 353 – 354

B. Online Source

[https://en.wikipedia.org/wiki/5S_\(methodology\)](https://en.wikipedia.org/wiki/5S_(methodology))

For inquiries or feedback, please write or call:

Department of Education - Bureau of Learning Resources (DepEd-BLR)

Ground Floor, Bonifacio Bldg., DepEd Complex
Meralco Avenue, Pasig City, Philippines 1600

Telefax: (632) 8634-1072; 8634-1054; 8631-4985

Email Address: blr.lrqad@deped.gov.ph * blr.lrpd@deped.gov.ph