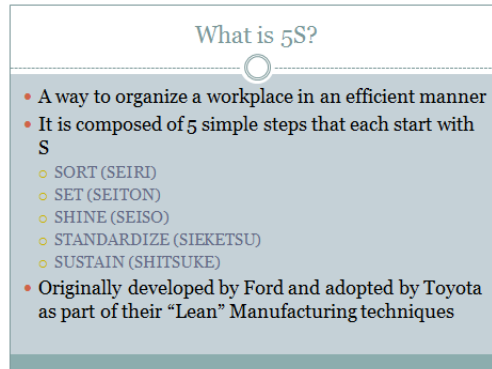


Proctor Copy

Learning Objective for this module: Be able to convey the aspects of 5S to a group of students and have them understand how to implement the steps in their learning environment.

Slide 2: What is 5S?



What is 5S?

- A way to organize a workplace in an efficient manner
- It is composed of 5 simple steps that each start with S
 - SORT (SEIRI)
 - SET (SEITON)
 - SHINE (SEISO)
 - STANDARDIZE (SIEKETSU)
 - SUSTAIN (SHITSUKE)
- Originally developed by Ford and adopted by Toyota as part of their “Lean” Manufacturing techniques

A way to organize a workplace in an efficient manner

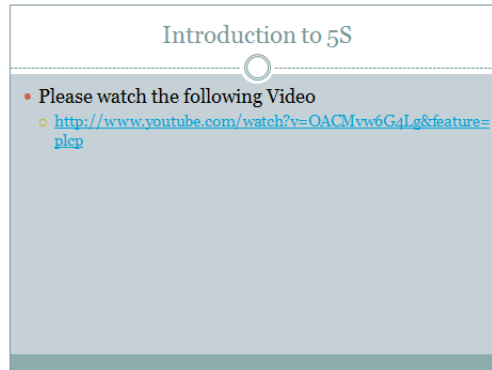
Speaking point: 5S can be used in any business to improve efficiency and productivity. It is a good way to evaluate current processes and eliminate wasted time and materials. It also enables problems to be recognized, evaluated, and fixed easily and in a timely manner.

Speaking Point: The translations are not exact, so some words may vary, but they mean the same thing. For example you may encounter straightening instead of setting

- It is composed of 5 simple steps that each start with S
 - SORT (SEIRI)
 - SET (SEITON)
 - SHINE (SEISO)
 - STANDARDIZE (SIEKETSU)
 - SUSTAIN (SHITSUKE)
- Originally developed by Henry Ford and then it was adopted by Toyota as part of their “Lean” Manufacturing techniques

Speaking Point: Talk about how Henry Ford was one of the first to develop the assembly line and the technology was then adapted by Toyota and implemented into their manufacturing process

Slide 3



Introduction to 5S

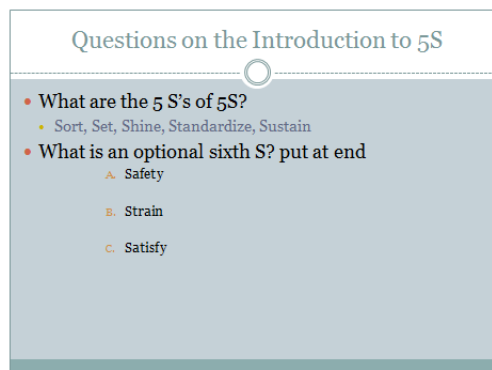
- Please watch the following Video
 - <http://www.youtube.com/watch?v=OACMvw6G4Lg&feature=plcp>

Have students watch a video on an introduction to 5S: after video

Speaking Point: Ask the Class for suggestions on “What Kind of waste does 5S remove”? It removes unnecessary tools and material while reducing production time.

In Industry time = money, the less time it takes for a process to be completed the more money the company makes and vice versa.

Slide 4



Questions on the Introduction to 5S

- What are the 5 S's of 5S?
 - Sort, Set, Shine, Standardize, Sustain
- What is an optional sixth S? put at end
 - A. Safety
 - B. Strain
 - C. Satisfy

Introduction Questions

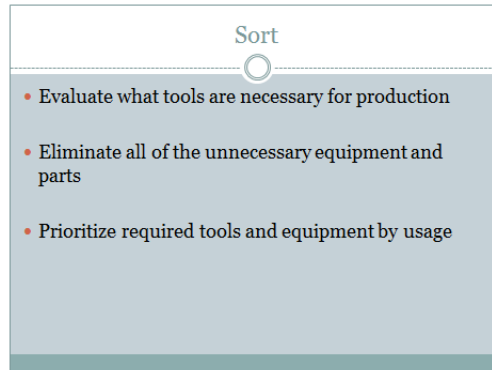
What are the 5S's?

Sort, Set, Shine, Standardize, Sustain

What is an optional sixth S?

Safety: Talk about why safety is important in a shop environment.

Slide 5



Sort

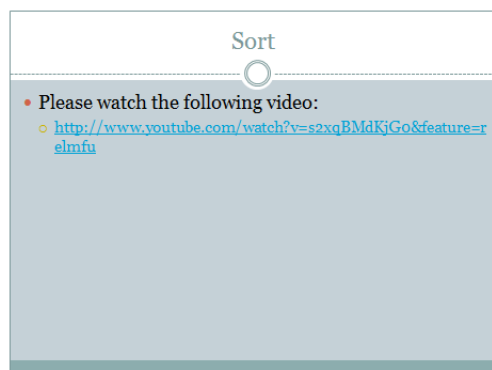
- Evaluate what tools are necessary for production
- Eliminate all of the unnecessary equipment and parts
- Prioritize required tools and equipment by usage

Sort

- Evaluate what tools are necessary for production. You look at your personal work station and analyze what is there and what is missing. Along with what is not necessary.
- Eliminate all of the unnecessary equipment and parts. After looking at your work station decide what is absolutely necessary and eliminate the unnecessary tools or material into storage.
- Prioritize required tools and equipment by usage. When organizing tool boxes or work benches, take what tool or material is used the most and that tool is put the closest to you. Each tool should be placed within reach accordingly.

Give an example: Suggest or ask the class what tools and materials that would be necessary at a work station to complete a job, maybe provide them with a print and ask them to analyze what tools and materials and fixturing that would be needed for the job.

Slide 6



Sort

- Please watch the following video:
 - <http://www.youtube.com/watch?v=s2xqBMdKjGo&feature=rilmfu>

Sort Video

Slide 7

Questions

- What does Sort look at in the workplace?
 - Sort looks at an existing workplace and analyzes what tools, equipment, and material are required for a given production task.
- What is the primary benefit of Sort?
 - Primary benefit is the reduction of unnecessary material on the production floor

Sort Questions

- What does Sort look at in the workplace?
 - Sort looks at an existing workplace and analyzes what tools, equipment, and material are required for a given production task.
- What is the primary benefit of Sort?
 - Primary benefit is the reduction of unnecessary material on the production floor. Bring up why having unnecessary material on the shop floor is detrimental to production.

Slide 8

Make some suggestions for improvement by
Sorting

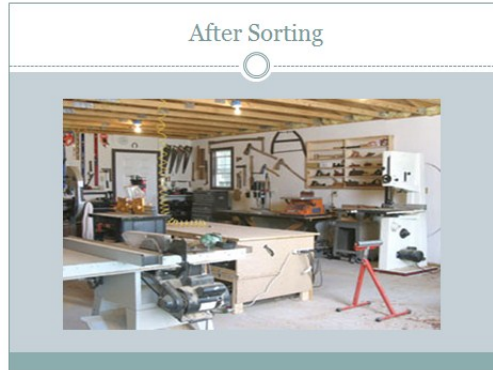


There is a picture on this slide and the teacher should ask the class to make some suggestions on how to improve this scenario.

Some points that can be brought up are:

- Get rid of trash that is on the work bench
- Remove obstacles that are on the floor (skid)
- Put newly received material or tools where they belong

Slide 9



This is a picture of what a shop or workplace should look like

Slide 10

Set

- Arrange the necessary tools in a way that they are easily accessible
- Prioritizes tools by usage allowing the most used tools readily available.
- Could also be called Straightening

SHADOW TOOL BOARD

Shadow boards are a good example of Set

SET

Arrange the necessary tools in a way that they are easily accessible

- Ask the class what the importance of this- by making tools and materials more accessible it cuts back on the time that an employee or student takes looking for a tool, this makes the production time shorter which in turn increases the value of the product.

Prioritizes tools by usage allowing the most used tools readily available.

- This is important from an ergonomic standpoint: by having the tools that are used most often right at hand it decreases the amount of bending and reaching that the employee or student will have to do for the job.

Could also be called Straightening

Additional comment: Shadow boards are commonly used across shops and industries and even offices. A shadow board is something that has the outline, shadow, or label of the tool that belongs in that spot. These can also be cut outs in foam that fit inside of a drawer to hold tools.

Slide 11

Set

- Please watch the following video:
 - <http://www.youtube.com/watch?v=i5bPmXr2yGs&feature=relmfu>

Video on SET

Slide 12

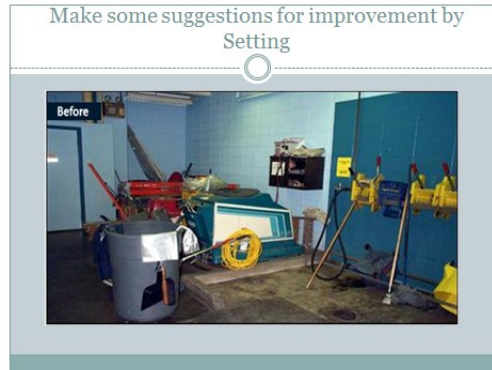
Questions

- What is a good example of Set?
 - a) Shadow Board
 - b) Tape outlines
 - c) Removing unnecessary material
 - d) A and B
- How should tools be prioritized?
 - Tools should be organized in an ergonomic fashion.

Questions on Set

- What is a good example of Set?
 - a) Shadow Board
 - b) Tape outlines
 - c) Removing unnecessary material
 - d) A and B**
- How should tools be prioritized?
 - Tools should be organized in an ergonomic fashion. Or they are organized in a fashion that allows for the most used tools to be easily accessed.

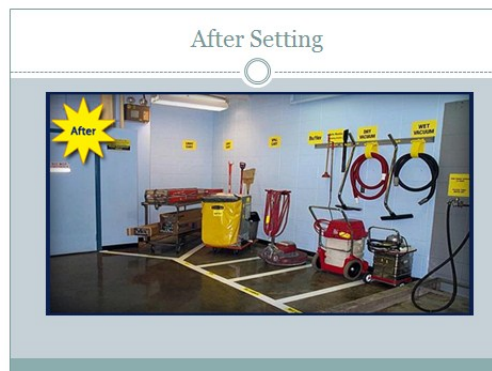
Slide 13



Have the class offer suggestions for this picture:

- Make specific places for each item.
- Use tape to section off parts of the shop for each item.
- None of these items are easily accessible.

Slide 14



Picture of After Setting

Slide 15

Shine

- Make sure that all of the equipment is clean and well organized.
- Repair anything within the workplace that needs repair.
- At the end of each shift, make it a task to clean your workspace.
- Could also be known as Sweeping.

SHINE

- Make sure that all of the equipment is clean and well organized.
 - This is important not only for the presentation of the shop, but for the maintenance of the equipment. This makes for repairs to be easy because the equipment won't have to be cleaned in order to be repaired and the equipment will last longer this way as well.
- Repair anything within the workplace that needs repair.
 - Making little repairs/ maintenance will extend the lifetime of a piece of equipment or tool.
- At the end of each shift, make it a task to clean your workspace.
 - This is also important because it enforces that the tools and equipment you utilize at work is your own and you would not want to come into work with your workstation a mess.
- Could also be known as Sweeping

Slide 16

Shine

- Please watch the following video on Shine:
 - <http://www.youtube.com/watch?v=Bj8jKgdE6Y&feature=relmfu>

Video

Slide 17

Questions

- Shine or shining can also be known as what?
 - a) Swiping
 - b) Sweeping
 - c) Sustain
- What does Shine involve?
 - The involvement of cleaning the workplace and repairing any equipment that needs repair.

Questions have the students answer the questions as a class.

- Shine or shining can also be known as what?
 - a) Swiping
 - b) Sweeping**
 - c) Sustain
- What does Shine involve?
 - The involvement of cleaning the workplace and repairing any equipment that needs repair.

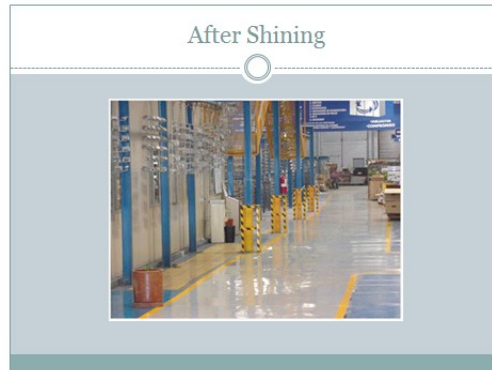
Slide 18

Make some suggestions for improvement by
Shining



Picture

Slide 19



Picture

Slide 20

Standardize

- Make sure that all work stations that do the same job are identical
- Everyone that is responsible for the same job should be able to work at any station
- Some tools of standardizing are checklists, charts, and short meetings.
- Involves assigning people to maintain the first three S's

STANDARDIZE

Make sure that all work stations that do the same job are identical.

- This will enable anyone who does that one task to use your bench and know where every tool is.

Everyone that is responsible for the same job should be able to work at any station

- This eliminates confusion if a student or employee is re-located to a different area. Also if a work station is shut down for maintenance or repairs the employee or student will be able to continue his or her work.

Some tools of standardizing are checklists, charts, and short meetings.

Involves assigning people to maintain the first three S's

Slide 21

Standardize

- Please watch the following video on Standardize:
- <http://www.youtube.com/watch?v=r3clfjEt3UM>

Video

For some reason this video has been cut short. The video still represents what Standardize entails in the 5S process.

Slide 22

Questions

- Standardize ensures that all works stations are _____?
 - a) Different
 - b) **Identical**
 - c) Similar
 - d) Personalized
- Identify tools used to implement Standardizing?
 - o The use of checklists, charts, and small meetings

Questions

- Standardize ensures that all works stations are _____?
 - a) Different
 - b) **Identical**
 - c) Similar
 - d) Personalized
- Identify tools used to implement Standardizing?
 - a) The use of checklists, charts, and small meetings

Slide 23

Sustain

- Maintain the developed standard work practices
- Sustain is critical in changing the workers' mentality so they follow 5S practices in their daily routine
- Sustain ensure that 5S practices are carried out all day and everyday

Sustain

Maintain the developed standard work practices

Sustain is critical in changing the workers' mentality so they follow 5S practices in their daily routine

Sustain ensure that 5S practices are carried out all day and everyday

Slide 24

Sustain

- Please watch the following video on Sustain:
 - <http://www.youtube.com/watch?v=8ZbXG2Hbt4w&feature=relmfu>

Slide 25

Questions

- **What is critical about the pillar Sustain?**
 - Sustain is critical in changing the workers' mentality so the follow 5S practices
- **In brief what does Sustain do for the 5S system?**
 - Sustain allows 5S to work, it ensures that workers' follow the 5S system and makes sure this system thrives day in and day out.

Questions

What is critical about the pillar Sustain?

Sustain is critical in changing the workers' mentality so the follow 5S practices.

- Talk about how it may be hard to implement new ideas because people are accustomed to the old way and don't think it needs to change.

In brief what does Sustain do for the 5S system?

Sustain allows 5S to work, it ensures that workers' follow the 5S system and makes sure this system thrives day in and day out.

- This is probably the most important aspect of 5s because if you don't sustain then all of the work you did in the other steps will be lost and useless.

Slide 26

Quiz Time

1. On a piece of paper write down the 5S's and why they are important.
2. You are a shop manager, Create a check list for your employees using this information to evaluate their workspace to make sure they are implementing 5S.

1. On a piece of paper write down the 5S's and why they are important.
2. You are a shop manager, Create a check list for your employees using this information to evaluate their workspace to make sure they are implementing 5S.
3. Take evaluations and if things need to be fixed have the students come up with ideas that would benefit them, and have them involved, not just the teacher assigning tasks.