Facilitator Guidebook

Inspector (Advance Scaffold)

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Acknowledgments

The Facilitator Guidebook for **Inspector (Advance Scaffold)**, **SSD/Q0202**, developed by the **Safety Skill Development Foundation (SSDF),** reflects our commitment to industry requirement for the job role, best practices in the profession, quality training requirement, regulatory compliances, workplace safety, health and sustainable practices. This guide is enriched with insights from **Subject Matter Experts (SMEs), trainers, and industry professionals**, ensuring its relevance to real-world applications.

We extend our special thanks to **CORE-EHS Solutions Pvt Ltd** for their invaluable expertise and support in developing course materials, significantly enhancing the safety and quality aspects of this guide.

Our gratitude also goes to trainers, assessors, industry experts, government bodies, and sector skill councils for their contributions toward advancing occupational safety across industries, including Hydrocarbon, Iron & Steel, Mining, Power, Automotive, Construction, Chemicals & Petrochemicals, and more.

The qualification is aligned with **NSQF** and this guide supports the **Skill India** initiative and is dedicated to trainers committed to excellence in skill development. SSDF welcomes feedback for continuous improvement.

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About this Guide Book

The increasing focus on safety across various industries is driving a surge in the demand for qualified Inspector (Advance Scaffold). This heightened need is resulting in a greater requirement for trained professionals in the field. As a result, there is an escalating necessity for trainers to prepare individuals with the essential skills to become competent Inspector (Advance Scaffold)

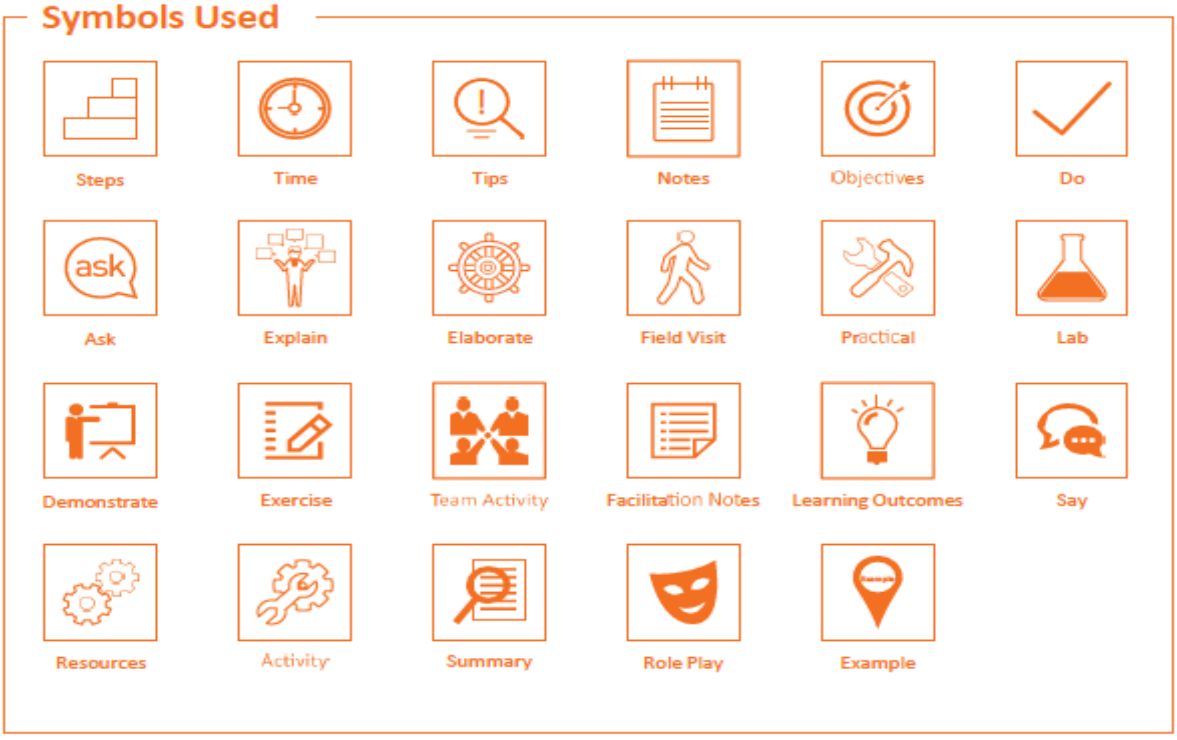
The objective of the guide is to provide an approach map for interacting with the trainees undergoing training on this job role. The aim of the course is to provide both theoretical and practical knowledge to the trainees, and to guide them regarding the procedure of assisting in scaffolding works. The guide is neither a substitute nor complete road map, but an aid to help to pass on the knowledge on all the aspects to the trainees in a systematic manner. It is expected that the trainer is fully conversant with all the contents of the guide. The guide is just to indicate how to proceed for covering a topic and includes some additional information that may be necessary for the trainer to develop better comprehension on the following aspects:

This Facilitator Guide is designed based on the Qualification Pack (QP) under the National Skill Qualification framework (NSQF) and it comprises of the following National Occupational Standards (NOS)/topics and additional topics.

1. **SSD/VSQ/N0211: Scaffoldings & Specifications**
2. **SSD/VSQ/N0212: Scaffold Drawings and Designs**
3. **SSD/VSQ/N0207: Advance Scaffold Design**
4. **SSD/VSQ/N0208: Advance Scaffold Inspection and Documentation**
5. **SSD/VSQ/N0209: Advance International Practices and Designs in Scaffoldings**
6. **SD/VSQ/N0210: Plan, Organize & Monitor**
7. **SSD/VSQ/N0206: Work with Safety, Health and Environment**
8. **DGT/VSQ/N0102: Employability Skills (60 Hours)**

The SSD/VSQ/Q0202: Inspector (Advance Scaffold) Qualification offers comprehensive guidance for trainers to equip participants with advanced expertise in scaffold inspection. This qualification addresses intricate scaffold systems, safety protocols, and compliance with regulatory standards, empowering inspectors to evaluate scaffold integrity with greater proficiency. Trainers receive well-defined learning objectives aligned with the National Occupational Standards (NOS), ensuring emphasis on essential elements of scaffold inspection. The guidebook highlights practical inspection methods, hazard recognition, and enhanced safety measures, enabling facilitators to provide thorough, hands-on training that adheres to industry standards and regulatory mandates.

Symbols Used



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Contents

1. Unit 1 Introduction to Scaffolding Occupation

1.1. Key Learning Outcomes

At the end of this module, the trainees will be able to:

- Describe the function and duties of Inspector (Advance Scaffold)

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- Describe fundamental process for Scaffolding inspection
- Describe fundamental terms used in the scaffolding industry
- Discuss potential future progressions and career options for a Scaffolding

1.2. Unit 1.1: Overview of the Industry

1.2.1. Unit Objectives

At the end of this unit, students will be able to:

- Give an overview of the construction industry.
- Fundamental terms used in the scaffolding industry
- fundamental process for Scaffolding inspection

1.2.2. Resources to be used

- Available objects such as Projection screen, whiteboard, projection screen, laptop, speaker, notebook, pen, participant handbook, etc
- Flip chart
- Attendance sheet
- Activities (role plays and games)

1.2.3. Ask

- Ask the participants to share their expectations from the program
- Ask them to tell what they know about the construction industry, types of construction, basic categories of construction projects, and market segments of the construction industry
- What is the 'Make-in-India' initiative?

1.2.4. Do

- Introduce yourself to the participants.
- Give an overview of the program to the participants - duration of the program, objective etc.
- Give an overview of the construction industry, types of construction, basic categories of construction projects, and market segments of the construction industry

1.2.5. Explain

- Explain about the construction industry, types of construction, basic categories of construction projects, and market segments of the construction industry

1.2.6. Tips

- Go slow with information flow with participants.
- Observe each participant's body language.
- Keep a positive and supportive approach towards the candidates

1.2.7. Activity: Team Spot

Purpose: The objective of this activity is to introduce participants to the different market segments within the construction industry.
Resources Required: Presentation materials (slides or handouts) explaining market segments in the construction industry, internet access or library resources for research, whiteboard or flip chart

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with markers, printed construction industry reports or data (optional but helpful), worksheets for students to complete during the activity.

Methods/Procedure:

Step 1: Introduction- Begin the activity by discussing the importance of understanding market segments in the construction industry. Explain that market segmentation helps professionals identify specialized opportunities and areas of expertise within the broader field of construction.

Step 2: Presentation- Deliver a presentation on the different market segments within the construction industry. Include information on residential construction, commercial construction, industrial construction, infrastructure development, and specializations like green building, renovation, and restoration. Use visual aids to make the information more engaging and accessible.

Step 3: Group Research- Divide the students into small groups and assign each group a specific market segment to focus on. Provide the groups with access to the internet or library resources to conduct research on their assigned market segment. They should explore the scope, current trends, major players, challenges, and potential career opportunities within their segment.

Step 4: Group Presentation- Each group presents their findings to the rest of the class. Encourage them to use visuals, statistics, and examples to support their presentation. Allow for a short Q&A session after each presentation to clarify doubts and exchange insights.

Step 5: Reflection and Discussion- Lead a class discussion to debrief the activity. Encourage students to share their thoughts on which market segments they find most appealing and why. Discuss the skills and qualifications required for different market segments and how students can prepare to excel in their chosen area.

Expected Outcome: By the end of this classroom activity, students are expected to:

1. Understand the concept of market segmentation in the construction industry.
2. Identify the various market segments within the construction field, including residential, commercial, industrial, infrastructure, and specialized sectors.
3. Analyse the characteristics, opportunities, and challenges associated with each market segment.
4. Gain insights into potential career paths and specialization options within the construction industry.
5. Reflect on their interests and skills to make informed decisions about their vocational course and future career goals in construction

1.2.8. Notes for Facilitation

- Revise the important points discussed in this unit.
- Clear the doubts of the students, if any. Encourage them to ask questions.
- Discuss the question with the class and answer their queries satisfactorily.
- Help participants identify how to apply the skills taught in the course to their work
- Praise participants and the group on improving their performance and developing new skills.
- Encourage participants to move through the initial difficulties of learning new skills, by focusing
- on steps in their progress and the importance of what they are learning to do.

1.2.9. Summary

Scaffolding is essential in the fields of construction, maintenance, and repair, as it provides temporary structures that support workers, materials, and tools at elevated levels. The profession of scaffolding encompasses the design, assembly, maintenance, and dismantling of scaffolds, all aimed at ensuring safety and efficiency on construction sites and similar work environments.

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Scaffolders are skilled professionals tasked with guaranteeing that scaffolding structures are safe, secure, and compliant with the regulations established by occupational safety and health authorities. Their responsibilities include assessing the appropriate type of scaffolding for specific projects, interpreting blueprints, and collaborating closely with other construction teams to ensure that scaffolds are correctly erected and maintained throughout the project's lifecycle.

This profession demands a high degree of skill, a thorough understanding of safety regulations, and familiarity with various scaffolding systems, including tube and clamp, frame, and suspended scaffolds. Scaffolders must also possess the expertise to identify potential hazards and mitigate risks associated with scaffold instability, fall hazards, and structural failures.

Given the focus on safety and compliance with industry standards, this profession is crucial in safeguarding workers and facilitating the successful execution of construction projects.

1.2.10. Exercise

1. What is the key consideration for scaffolding safety?
a) The height of the scaffold
b) The number of workers on the scaffold
c) The stability and strength of the scaffold structure
d) The colour of the scaffold
2. Scaffolding is only used for residential construction projects. (T/F)
3. Scaffolders do not need to adhere to safety regulations during scaffold assembly and inspection. (T/F)
4. The primary purpose of scaffolding is to provide temporary support for workers, tools, and materials during construction. (T/F)
5. One of the key responsibilities of a scaffolder is to ensure that the scaffold is _____ before it is used by workers.
6. _____ scaffolds are designed to be suspended from a structure, typically used for work on tall buildings or bridges.

1.3. Unit 1.2: Roles and Responsibilities of a Inspector (Advance Scaffold)

1.3.1. Unit Objectives

At the end of this unit, students will be able to:

1. Identify roles and responsibilities of Inspector (Advance Scaffold)

2. Identify essential skills of Basic Scaffold Inspector

1.3.2. Resources to be used

- Available objects such as Projection screen, whiteboard, projection screen, laptop, speaker, notebook, pen, participant handbook, etc
- Flip chart
- Attendance sheet
- Activities (role plays and games)

1.3.3. Ask

- Ask the participants to share their expectations from the program

1.3.4. Do

- Give a brief introduction on the job description of Basic Scaffold Inspector outlining their personal attributes to the participants
- Provide the participants with a List of Roles and Responsibilities of Basic Scaffold Inspector

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- Talk about the skills and knowledge which are essential to become a Basic Scaffold Inspector

1.3.5. Explain

Describe about the roles and responsibility of Basic Scaffold Inspector

1.3.6. Tips

- Go slow with information flow with participants.
- Observe each participant's body language.
- Keep a positive and supportive approach towards the candidates

1.3.7. Activity: Team Spot

- Separate the class in 2 different teams.
- Each team will be assigned with topics - Roles and responsibilities of Basic Scaffold Inspector
- Ask them to present the given topics team after team, and state examples individually to explain

1.3.8. Notes for Facilitation

- Revise the important points discussed in this unit.
- Clear the doubts of the students, if any. Encourage them to ask questions.
- Discuss the question with the class and answer their queries satisfactorily.
- Help participants identify how to apply the skills taught in the course to their work
- Praise participants and the group on improving their performance and developing new skills.
- Encourage participants to move through the initial difficulties of learning new skills, by focusing
- on steps in their progress and the importance of what they are learning to do.

1.3.9. Summary

1. Scaffolding Inspection: The inspector verifies that scaffolds are constructed correctly, ensuring they are secure and stable. This includes assessing the foundation, checking structural integrity, and confirming that all components, such as planks, braces, and ties, are properly installed and in place.
2. Adherence to Safety Regulations: A Basic Scaffold Inspector confirms that the scaffold complies with both local and international safety standards, which encompass load capacities, height specifications, and the materials utilized.
3. Risk Identification: Inspectors are responsible for identifying and documenting any potential hazards, including structural deficiencies, improper assembly, or weather-related issues that could jeopardize safety.
4. Continuous Oversight: The inspector monitors the scaffolding's safety throughout its operational period, performing regular assessments to evaluate its condition and usage, and addressing any emerging concerns.
5. Record Keeping and Reporting: Comprehensive records of inspections, along with any corrective measures taken, are maintained. Inspectors generate reports for supervisors, contractors, or safety managers to promote transparency and accountability.
6. Teamwork and Communication: Scaffold inspectors collaborate closely with construction personnel, engineers, and safety officers to share findings, suggest enhancements, and ensure adherence to safety protocols.

1.3.10. Exercise

1. A Inspector (Advance Scaffold) is responsible for:
a) Installing scaffolding components
b) Ensuring the stability and safety of scaffolding structures

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c) Providing construction tools to workers
d) Managing construction budgets
2. Which document does a Inspector (Advance Scaffold) maintain as part of their role?
a) Blueprint designs
b) Inspection reports and safety checklists
c) Worker payroll records
d) Material purchase orders
4. A Inspector (Advance Scaffold) is only required to conduct an inspection once during the construction phase.(T/F)
5. Inspector (Advance Scaffold)s must identify and report potential hazards related to scaffolding use.(T/F)
6. The Inspector (Advance Scaffold) is responsible for conducting _____ inspections of scaffolding to check for stability and compliance.
7. The inspector must identify potential _____ such as damaged scaffolding, improper installation, or environmental risks.

2. Unit 2 NOS 1: SSD/VSQ/N0201: Scaffoldings and Specifications

2.1. Key Learning Outcomes

At the end of this module, the trainees will be able to

- **Identification of scaffold and components.**
- **Design load calculation of the scaffold.**
- **Fall protection requirements and provisions in the scaffold.**

2.2. Unit 2.1: Types of Scaffoldings

2.2.1. Unit Objectives

At the end of this unit, students will be able to:

- **Identification of several types of scaffolds, their components.**
- **Determination of type of scaffold required as per site & load requirements.**
- **Identification of working & faulty components and defect in the components.**

2.2.2. Resources

- Whiteboard, erasable marker, board cleaner, projection screen, laptop, speaker, notebook, pen, participant handbook, etc
- Flip chart
- Participant Manual
- Projection screen and PowerPoint presentations.
- Activities (role plays)

2.2.3. Say

- **Describe types of scaffolds, their components**
- **Describe about type of scaffold required as per load requirements**
- **Describe about how to identify working & faulty components and defect in the components**

2.2.4. Explain

- **Describe types of scaffolds, their components**

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- **Describe about type of scaffold required as per load requirements**
- **Describe about how to identify working & faulty components and defect in the components**

2.2.5. Activity

Group Activity

Divide the class into small groups. Provide each group with different scaffold pictures and a set of components (e.g., tubes, planks, braces).

Ask the groups to identify the type of scaffold depicted and match the components to their respective positions on the scaffold.

Each group will present their findings to the class, explaining the types of scaffolds and how the components are used.

2.2.6. Notes for Facilitation

- Summarize the important points and terms explained in the session.
- Ask participants if they have any doubts. Encourage them to ask questions.
- Answer questions, as needed, providing concrete and brief answers.
- Tell participants to complete the questions at the end of the unit.
- Ensure that every participant answers all the questions.

2.2.7. Summary

Identification of Scaffold Types

The individual should be capable of distinguishing among different scaffold types, such as tube and clamp, frame, suspended, mobile, and cantilever scaffolds. Each type comprises specific elements, including base plates, standards, ledgers, and cross braces, which collectively ensure structural integrity and stability. Recognizing these elements and comprehending their roles is vital for safe scaffold assembly.

Assessment of Scaffold Type According to Site and Load Needs

The ability to evaluate site conditions—such as height, available space, and load-bearing requirements—is essential for selecting the correct scaffold type. Considerations like the nature of the task (e.g., construction, maintenance, or cleaning), the weight of materials, and the number of personnel involved will impact the scaffold selection. It is crucial that the chosen scaffold adheres to load specifications to guarantee worker safety and facilitate effective project execution.

Detection of Defective Components and Issues

The individual must be proficient in identifying defects or issues within scaffolding components. This includes spotting damaged or deteriorated parts, such as cracked poles, loose braces, or compromised planks. Routine inspections of scaffolds are imperative to avert accidents stemming from structural failures. Recognizing and addressing defective components is essential for maintaining scaffold integrity and ensuring worker safety.

2.2.8. Exercise

1. What is the primary purpose of determining the type of scaffold required on a worksite?

A) To decide the design of the scaffold

B) To ensure compliance with building codes

C) To match the scaffold to the site and load requirements

D) To determine the number of workers needed

2. Which of the following scaffolds would be most suitable for outdoor, large-scale construction sites?

A) Single-point suspension scaffold

B) Rolling scaffold

C) Suspended scaffold

D) System scaffold

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3. True or False: Mobile scaffolds are always the best choice for high-load, heavy-duty construction.
4. True or False: The user must be able to identify both the working and faulty components of scaffolds to ensure safety.
5. The _____ scaffold is ideal for jobs requiring mobility and quick adjustments, as it is mounted on wheels.
6. One of the key factors in selecting the appropriate scaffold is determining the _____ requirements of the worksite.

2.3. Unit 2.2 Design Load Calculation

2.3.1. Unit Objectives

At the end of this unit, students will be able to

- Compute Load on Scaffold and Optimum Load
- Calculate Design Load for Scaffold
- Know Working Requirements of Scaffold Components:

2.3.2. Resources

- Whiteboard, erasable marker, board cleaner, projection screen, laptop, speaker, notebook, pen, participant handbook, etc
- Flip chart
- Participant Manual
- Projection screen and PowerPoint presentations.
- Activities (role plays)

2.3.3. Say

- Describe how to Compute Load on Scaffold and Optimum Load
- Describe about how to calculate Design Load for Scaffold
- Describe Working Requirements of Scaffold Components:

2.3.4. Explain

- Describe how to Compute Load on Scaffold and Optimum Load
- Describe about how to calculate Design Load for Scaffold
- Describe Working Requirements of Scaffold Components:

2.3.5. Activity

Group Exercise

Divide the class into small groups (3-4 students per group).

Provide each group with a sample scaffold design, including:

Total number of workers on the scaffold.

Tools and materials placed on the scaffold.

Scaffold height, platform size, and expected environmental factors (e.g., wind speed).

Ask the groups to calculate:

The total load on the scaffold (sum of all loads, including workers, tools, materials, etc.).

The optimum load the scaffold can carry safely, based on design specifications.

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2.3.6. Notes for Facilitation

- Summarize the important points and terms explained in the session.
- Ask participants if they have any doubts. Encourage them to ask questions.
- Answer questions, as needed, providing concrete and brief answers.
- Tell participants to complete the questions at the end of the unit.
- Ensure that every participant answers all the questions.

2.3.7. Summary

Determine the Load on Scaffold & Optimum Load

The individual must come up for the total load-induced on the scaffold considering all workers, materials, and tools, along with environmental causes like wind.

The optimum load is then calculated so that the scaffold does not get overloaded and is able to bear well the maximum conceivable weight without loss of stability or structural failure.

Calculate the Design Load for Scaffold

The personal design load calculation is expected to be accurate. It all adds up: the anticipated load, safety margins, and the legal requirements. The design load is the scaffold required to bear the weights with regard to persons using the scaffold, together with equipment and the types of scaffold utilized.

Know the Working Requirements of Scaffold Components

The candidate must know the working requirement for each of the components of the scaffold, such as base plates, ties, supports, and couplers.

All the components must be properly designed and positioned such that they effectively distribute all loads throughout the structural system and also to maintain its integrity with the changing in-loading. Tie-offs and support must be as safe and stable as possible.

2.3.8. Exercise

1. What is included when determining the load on a scaffold?

a) Only the workers' weight

b) Only the materials used

c) Workers, materials, tools, and environmental factors like wind

d) None of the above

2. Which of the following is part of the scaffold's working requirements?

a) Only the base plates

b) The safe and stable positioning of all components, including base plates, ties, supports, and couplers

c) Only the tie-offs

d) The aesthetic appearance of the scaffold

3. The design load for scaffolding includes legal requirements and safety margins to ensure the scaffold can support its intended use.

4. Only the weight of workers should be considered when determining the load on a scaffold.

5. The design load must account for the anticipated _____, safety _____, and legal _____.

6. Each scaffold component, such as _____ plates, ties, supports, and _____, must be designed and positioned for proper load distribution.

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2.4. Unit 2.3: Fall Protection Requirements

2.4.1. Unit Objectives

At the end of this unit, students will be able to

- Identification of types of fall protection for the scaffolds, tie-offs, supports, and ladders.
- Working out of fall protections required in the scaffold for various activities and effectiveness..

2.4.2. Resources

- Whiteboard, erasable marker, board cleaner, projection screen, laptop, speaker, notebook, pen, participant handbook, etc
- Flip chart
- Participant Manual
- Projection screen and PowerPoint presentations.
- Activities (role plays)

2.4.3. Say

- Describe about different types of fall protection for the scaffolds.

2.4.4. Explain

- Describe about different types of fall protection for the scaffolds.

2.4.5. Activity

Group Activity - Matching Fall Protection Types:
Divide participants into small groups.
Provide each group with handouts or diagrams showing various types of scaffolds, ladders, and elevated work platforms.
Have groups identify and label which fall protection system (e.g., guardrails, tie-offs, personal fall arrest systems) should be used on each scaffold, ladder, or structure.
Ask groups to discuss why they chose each fall protection system for the specific situation.
Group Sharing:
Have each group share their findings with the class.
Discuss and correct any misconceptions, ensuring the correct fall protection systems are identified.

2.4.6. Notes for Facilitation

- Summarize the important points and terms explained in the session.
- Ask participants if they have any doubts. Encourage them to ask questions.
- Answer questions, as needed, providing concrete and brief answers.
- Tell participants to complete the questions at the end of the unit.
- Ensure that every participant answers all the questions.

2.4.7. Summary

Identification of Fall Protection Types

The person can identify and select the appropriate types of fall protection for various scaffolding components, including guardrails, personal fall arrest systems (PFAS), tie-offs, supports, and ladders. All these systems serve as a deterrent to fall and assure that workers are restrained. Meanwhile, scaffold

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stability is maintained during elevated work. In this case, ladder fall protection consists of ladder tie-offs and cages.

Determining Fall Protection Needs for Tasks

The person would now determine and calculate how much fall protection really is needed for different scaffolding activities. This would require knowing the specific need based on the activity's nature, height of scaffold, and equipment. Must determine the effectiveness of the selected fall protection systems so that they are suitable and dependable for the given task to ensure they provide adequate safety for the worker.

2.4.8. Exercise

1. Which of the following is NOT a type of fall protection for scaffolds?

a) Guardrails

b) Personal fall arrest systems (PFAS)

c) Ladders

d) Safety nets

2. What should be considered when determining the fall protection requirements for a scaffold?

a) The height of the scaffold and the task being performed

b) The colour of the scaffold

c) The material used for the scaffold only

d) The time of day when the work is performed

3. For scaffolds, a common fall protection system includes _____, which are installed along the edges to prevent workers from falling off the platform.

4. When working on a scaffold at heights greater than _____ feet, a personal fall arrest system (PFAS) is typically required.

5. True or False: The effectiveness of a fall protection system is determined by the height of the scaffold and the worker's activity.

6. True or False: Ladders do not require any form of fall protection when used in scaffolding work.

3. Unit 3 NOS 2: SSD/VSQ/N0212: Scaffold Drawings and Designs

3.1. Key Learning Outcomes

- Reading & Understanding scaffold drawings
- Scaffold requirement & design of supported scaffold up to 20-meter height.
- Identification of fall protection & design.

3.2. Unit 3.1. Scaffold Drawing & Details

3.2.1. Unit Objectives

At the end of this unit, students will be able to:

- Reading and understanding of scaffold drawings.
- Interpretations of scaffold drawings.

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- Assist in the preparation of scaffold drawings, contributing to the design and planning process..

3.2.2. Resources

- Whiteboard, erasable marker, board cleaner, projection screen, laptop, speaker, notebook, pen, participant handbook, etc
- Flip chart
- Participant Manual
- Projection screen and PowerPoint presentations.
- Activities (role plays)

3.2.3. Say

- Describe about scaffold drawings components.
- Describe design and planning process of scaffold

3.2.4. Explain

- Describe about scaffold drawings components.
- Describe design and planning process of scaffold

3.2.5. Activity

Provide participants with a more complex scaffold drawing and a list of questions based on the drawing. The questions can include:

What type of scaffold system is shown (e.g., mobile, tubular)?

What are the key safety features in the design?

Are there any load-bearing considerations mentioned?

What material is used for the scaffold's main structure?

How is the scaffold supported, and where are the tie-offs?

Have participants work individually or in groups to answer the questions based on their interpretation of the drawing.

Class Discussion:

After participants complete the activity, review the answers as a class, encouraging discussion and clarification of any uncertainties. Ensure that everyone understands how to interpret the scaffold design accurately..

3.2.6. Notes for Facilitation

Summarize the important points and terms explained in the session.

- Ask participants if they have any doubts. Encourage them to ask questions.
- Answer questions, as needed, providing concrete and brief answers.
- Tell participants to complete the questions at the end of the unit.
- Ensure that every participant answers all the questions

3.2.7. Summary

Reading and Understating the Scaffold Drawings.

A person must be able to read and understand scaffold drawings wherein the scaffold system is specifically constructed. One should recognize the component related to the dimensions, the material

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specifications, the different types of scaffolds, and load capacities. As able to interpret, this is to prevent construction of scaffolds under a specific design.

Interpret the Scaffold Drawings

The effectiveness of interpreting scaffold drawings is critical. Understand the symbols and dimension measurements, and the various indications in the drawings denote materials, dimensions, and safety standards of the scaffold. Correct interpretation enables identification of correct components, understanding of hazard conditions, and building critical requirements.

Help in Drawing Scaffold

People should assist in preparing scaffold drawings. It involves working with the design team in constructing accurate and functional layouts based on specific conditions like height, load capacity, and safety features of the scaffold. This produces drawings whose design and analysis parameters ensure structural integrity and safety in scaffold designs.

3.2.8. Exercise

1. What is the key step in interpreting scaffold drawings correctly?

a) Understanding symbols and notations

b) Estimating the cost of materials

c) Choosing the right workers for assembly

d) Visualizing the project in 3D

2. Which of the following statements is true when preparing scaffold drawings?

a) Only one person needs to be involved in the drawing process.

b) The drawings should be detailed with scale and measurements.

c) It is not important to include safety measures.

d) The drawings should only focus on aesthetics.

3. Scaffold drawings should include _____ to indicate how each component fits together in the system.

4._____ is crucial in the preparation of scaffold drawings to ensure the scaffold can support the required loads safely.

5. True or False: Interpretations of scaffold drawings should be based on an understanding of materials, dimensions, and load-bearing capacity.

6.True or False: When preparing scaffold drawings, only the height of the scaffold is necessary to show, other dimensions are not as important.

3.3. Unit 3.2. Scaffold Design

3.3.1. Unit Objectives

At the end of this unit, students will be able to:

- Ensure compliance with safety, stability, and load-bearing requirements as specified in Indian scaffold design codes.

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- Be able to adapt the scaffold designs to meet the safety and structural requirements specified in these international guidelines.
- Conduct checks on scaffold designs for compliance with both Indian and international standards, ensuring that all components are correctly specified and that safety protocols are adhered to

3.3.2. Resources

- Whiteboard, erasable marker, board cleaner, projection screen, laptop, speaker, notebook, pen, participant handbook, etc
- Flip chart
- Participant Manual
- Projection screen and PowerPoint presentations.
- Activities (role plays)

3.3.3. Say

- Describe about design details of scaffolds as per Indian Standards
- Describe about design details of scaffold as per International Standards of OSHA & BS standards
- Describe about how to Check of design details of scaffolds.

3.3.4. Explain

- Describe about design details of scaffolds as per Indian Standards
- Describe about design details of scaffold as per International Standards of OSHA & BS standards
- Describe about how to Check of design details of scaffolds.

3.3.5. Activity

Design Calculation

Divide participants into small groups and provide them with a scaffold design scenario (e.g., designing a mobile scaffold for a 15-meter-high building using Indian Standards).

Each group will work out the design details, considering the materials, dimensions, and safety features specified in the given standards.

Encourage groups to calculate load-bearing capacities, tie-offs, support systems, and other necessary design details.

3.3.6. Notes for Facilitation

Summarize the important points and terms explained in the session.

- Ask participants if they have any doubts. Encourage them to ask questions.
- Answer questions, as needed, providing concrete and brief answers.
- Tell participants to complete the questions at the end of the unit.
- Ensure that every participant answers all the questions

3.3.7. Summary

- To understand and apply Indian Standards in design in support and mobile scaffolds up to a height of 20 meters concerning compliance with safety and structural requirements.

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- The design is done with reference to OSHA and British Standards (BS) for supported and mobile scaffolds up to 20 meters in height for international conformity with safety and construction regulations.
- Validate the accuracy and safety of scaffold design details as per related national and international standards for functionality and structural integrity.

3.3.8. Exercise

1. Which Indian Standard provides guidelines for designing supported and mobile scaffolds?

a) IS 456:2000

b) IS 3696-1:2011

c) IS 800:2007

d) IS 3370:1965

2. Which international standards are used for designing scaffolds in terms of safety and construction?

a) OSHA and ASTM

b) BS 5973 and OSHA

c) BS 8133 and BS 8000

d) OSHA and ASTM

3. The design of scaffolds in India is primarily guided by the _____ standard for safety and structural integrity.

4. According to Indian Standards, scaffolds should be designed to support a load of at least _____ kg per platform for mobile scaffolds

5. True or False: OSHA standards emphasize the importance of scaffold stability and prevention of falls and tipping.

6. True or False: BS 5973 specifies the design criteria for scaffolds, including both temporary and permanent structures.

3.4. Unit 3.3. Fall Protection Requirements

3.4.1. Unit Objectives

At the end of this unit, students will be able to

- Identification of types of fall protection for the scaffolds, tie-offs, supports, and ladders.
- Working out of fall protections required in the scaffold for various activities and effectiveness..

3.4.2. Resources

- Whiteboard, erasable marker, board cleaner, projection screen, laptop, speaker, notebook, pen, participant handbook, etc
- Flip chart
- Participant Manual
- Projection screen and PowerPoint presentations.
- Activities (role plays)

3.4.3. Say

- Describe about different types of fall protection for the scaffolds.

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3.4.4. Explain

- Describe about different types of fall protection for the scaffolds.

3.4.5. Activity

Group Activity - Matching Fall Protection Types:
Divide participants into small groups.
Provide each group with handouts or diagrams showing various types of scaffolds, ladders, and elevated work platforms.
Have groups identify and label which fall protection system (e.g., guardrails, tie-offs, personal fall arrest systems) should be used on each scaffold, ladder, or structure.
Ask groups to discuss why they chose each fall protection system for the specific situation.
Group Sharing:
Have each group share their findings with the class.
Discuss and correct any misconceptions, ensuring the correct fall protection systems are identified.

3.4.6. Notes for Facilitation

- Summarize the important points and terms explained in the session.
- Ask participants if they have any doubts. Encourage them to ask questions.
- Answer questions, as needed, providing concrete and brief answers.
- Tell participants to complete the questions at the end of the unit.
- Ensure that every participant answers all the questions.

3.4.7. Summary

Identification of Fall Protection Types

The person can identify and select the appropriate types of fall protection for various scaffolding components, including guardrails, personal fall arrest systems (PFAS), tie-offs, supports, and ladders. All these systems serve as a deterrent to fall and assure that workers are restrained. Meanwhile, scaffold stability is maintained during elevated work. In this case, ladder fall protection consists of ladder tie-offs and cages.

Determining Fall Protection Needs for Tasks

The person would now determine and calculate how much fall protection really is needed for different scaffolding activities. This would require knowing the specific need based on the activity's nature, height of scaffold, and equipment. Must determine the effectiveness of the selected fall protection systems so that they are suitable and dependable for the given task to ensure they provide adequate safety for the worker.

3.4.8. Exercise

1. Which of the following is NOT a type of fall protection for scaffolds?

a) Guardrails

b) Personal fall arrest systems (PFAS)

c) Ladders

d) Safety nets

2. What should be considered when determining the fall protection requirements for a scaffold?

a) The height of the scaffold and the task being performed

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b) The colour of the scaffold

c) The material used for the scaffold only

d) The time of day when the work is performed

3. For scaffolds, a common fall protection system includes _____, which are installed along the edges to prevent workers from falling off the platform.

4. When working on a scaffold at heights greater than _____ feet, a personal fall arrest system (PFAS) is typically required.

5. True or False: The effectiveness of a fall protection system is determined by the height of the scaffold and the worker's activity.

6. True or False: Ladders do not require any form of fall protection when used in scaffolding work.

4. Unit 4 NOS 3 SSD/VSQ/N0207: Advance Scaffold Design

4.1. Key Learning Outcomes

At the end of this module, the trainees will be able to:

- Safety & Design check during inspection to prevent any accident during its use.
- Inspection of scaffold after erection before opening for use.
- Documents to be prepared and maintained in scaffold inspection

4.2. Unit 4.1 Scaffold Drawing & Details

4.2.1. Unit Objectives

At the end of this unit, students will be able to:

- Enhance your skills in interpreting and comprehending scaffold drawings, with an emphasis on cantilever and suspended scaffolds. Pay attention to the various components, dimensions, and safety elements involved.
- Develop expertise in analysing scaffold drawings, focusing on cantilever and suspended scaffolds, to evaluate design integrity, stability, and adherence to safety regulations.
- Support the creation of scaffold drawings by utilizing expertise in scaffold design principles, while ensuring precision, safety, and adherence to regulatory standards.

4.2.2. Resources to be used

- Available objects such as Projection screen, whiteboard, projection screen, laptop, speaker, notebook, pen, participant handbook, etc
- Flip chart
- Attendance sheet
- Activities (role plays and games)

4.2.3. Ask

- Describe about analysing scaffold drawings, focusing on cantilever and suspended scaffolds, to evaluate design integrity, stability, and adherence to safety regulations.

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- Describe scaffold design principles, while ensuring precision, safety, and adherence to regulatory standards.

4.2.4. Explain

- Describe about analysing scaffold drawings, focusing on cantilever and suspended scaffolds, to evaluate design integrity, stability, and adherence to safety regulations.
- Describe scaffold design principles, while ensuring precision, safety, and adherence to regulatory standards.

4.2.5. Activity

Provide each participant with a set of scaffold drawings, including cantilever and suspended scaffold designs.

Ask participants to identify key components in the drawings (e.g., base plates, standards, ledgers, braces).

Discuss the symbols, measurements, and materials used in the drawings.

Allow participants to ask questions and discuss common challenges in reading scaffold drawings.

Participants will be able to recognize and understand the components of scaffold designs and their purpose in ensuring safety and stability.

4.2.6. Notes for Facilitation

- Revise the important points discussed in this unit.
- Clear the doubts of the students, if any. Encourage them to ask questions.
- Discuss the question with the class and answer their queries satisfactorily.
- Help participants identify how to apply the skills taught in the course to their work
- Praise participants and the group on improving their performance and developing new skills.
- Encourage participants to move through the initial difficulties of learning new skills, by focusing
- on steps in their progress and the importance of what they are learning to do.

4.2.7. Summary

Proficiency in Reading Scaffold Drawings

Proficiency in reading scaffold drawings is vital for recognizing essential structural elements such as base plates, standards, ledgers, and braces. It is important for individuals to understand the symbols, dimensions, and materials depicted in the drawings to ensure that the scaffold is designed and constructed properly, prioritizing safety and stability.

Analysis of Scaffold Drawings

The ability to analyse scaffold drawings allows individuals to evaluate the design specifics. This includes assessing the stability, safety features, load-bearing capacity, and overall structural integrity of the scaffolds. For cantilever and suspended scaffolds, it is particularly important to identify potential risks, vulnerabilities, and adherence to regulatory standards as indicated in the drawings.

Support in Creating Scaffold Drawings

Individuals should be equipped to support the creation of scaffold drawings, ensuring compliance with safety standards and design guidelines. This includes assisting with layout, measurements, and the

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incorporation of structural components to produce precise and effective scaffold designs. Well-prepared drawings are crucial for ensuring scaffold safety and meeting regulatory requirements throughout the construction and operational phases.

4.2.8. Exercise

1. What is the primary purpose of reading and understanding scaffold drawings?

a) To calculate the cost of materials

b) To identify structural components and ensure safety

c) To design the scaffold

d) To determine the colour of scaffolds

2. When assisting in the preparation of scaffold drawings, what must be ensured?

a) The design is based on personal preferences

b) All safety and structural requirements are accurately represented

c) Drawings are created without considering safety regulations

d) Drawings only include basic scaffold structures

3. Reading and understanding scaffold drawings is not essential for ensuring the safety of a scaffold structure.(T/F)

4. Interpretation of scaffold drawings includes identifying any potential safety risks or weaknesses in the design(T/F)

5. The process of interpreting scaffold drawings involves identifying structural components like _____, ledgers, and braces.

6. Scaffold drawings for cantilever and suspended scaffolds should indicate the scaffold's _____, load-bearing capacity, and safety features.

Scaffold Design

4.3. Unit 4.2 Scaffold Design

4.3.1. Unit Objectives

At the end of this unit, students will be able to:

- Ensure compliance with safety, stability, and load-bearing requirements as specified in Indian scaffold design codes.
- Be able to adapt the scaffold designs to meet the safety and structural requirements specified in these international guidelines.
- Conduct checks on scaffold designs for compliance with both Indian and international standards, ensuring that all components are correctly specified and that safety protocols are adhered to

4.3.2. Resources

- Whiteboard, erasable marker, board cleaner, projection screen, laptop, speaker, notebook, pen, participant handbook, etc
- Flip chart
- Participant Manual
- Projection screen and PowerPoint presentations.

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- Activities (role plays)

4.3.3. Say

- Describe about design details of scaffolds as per Indian Standards
- Describe about design details of scaffold as per International Standards of OSHA & BS standards
- Describe about how to Check of design details of scaffolds.

4.3.4. Explain

- Describe about design details of scaffolds as per Indian Standards
- Describe about design details of scaffold as per International Standards of OSHA & BS standards
- Describe about how to Check of design details of scaffolds.

4.3.5. Activity

Design Calculation

Divide participants into small groups and provide them with a scaffold design scenario (e.g., designing a mobile scaffold for a 15-meter-high building using Indian Standards).

Each group will work out the design details, considering the materials, dimensions, and safety features specified in the given standards.

Encourage groups to calculate load-bearing capacities, tie-offs, support systems, and other necessary design details.

4.3.6. Notes for Facilitation

Summarize the important points and terms explained in the session.

- Ask participants if they have any doubts. Encourage them to ask questions.
- Answer questions, as needed, providing concrete and brief answers.
- Tell participants to complete the questions at the end of the unit.
- Ensure that every participant answers all the questions

4.3.7. Summary

- To understand and apply Indian Standards in design in support and mobile scaffolds up to a height of 20 meters concerning compliance with safety and structural requirements.
- The design is done with reference to OSHA and British Standards (BS) for supported and mobile scaffolds up to 20 meters in height for international conformity with safety and construction regulations.
- Validate the accuracy and safety of scaffold design details as per related national and international standards for functionality and structural integrity.

4.3.8. Exercise

1. What is the purpose of using design codes and standards in advanced scaffold design?

a) To limit creativity in scaffold designs

b) To ensure the design meets safety, legal, and performance requirements

c) To reduce the cost of materials

d) To ensure the scaffold looks visually appealing

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2. Which international standards are used for designing scaffolds in terms of safety and construction?

a) OSHA and ASTM

b) BS 5973 and OSHA

c) BS 8133 and BS 8000

d) OSHA and ASTM

3. The design of scaffolds in India is primarily guided by the _____ standard for safety and structural integrity.

4. According to Indian Standards, scaffolds should be designed to support a load of at least _____ kg per platform for mobile scaffolds

5. True or False: OSHA standards emphasize the importance of scaffold stability and prevention of falls and tipping.

6. True or False: BS 5973 specifies the design criteria for scaffolds, including both temporary and permanent structures.

4.4. Unit 4.3. Fall Protection Requirements

4.4.1. Unit Objectives

At the end of this unit, students will be able to

- Identification of types of fall protection for the scaffolds, tie-offs, supports, and ladders.
- Working out of fall protections required in the scaffold for various activities and effectiveness..

4.4.2. Resources

- Whiteboard, erasable marker, board cleaner, projection screen, laptop, speaker, notebook, pen, participant handbook, etc
- Flip chart
- Participant Manual
- Projection screen and PowerPoint presentations.
- Activities (role plays)

4.4.3. Say

- Describe about different types of fall protection for the scaffolds.

4.4.4. Explain

- Describe about different types of fall protection for the scaffolds.

4.4.5. Activity

Group Activity - Matching Fall Protection Types:
Divide participants into small groups.
Provide each group with handouts or diagrams showing various types of scaffolds, ladders, and elevated work platforms.
Have groups identify and label which fall protection system (e.g., guardrails, tie-offs, personal fall arrest systems) should be used on each scaffold, ladder, or structure.
Ask groups to discuss why they chose each fall protection system for the specific situation.
Group Sharing:
Have each group share their findings with the class.
Discuss and correct any misconceptions, ensuring the correct fall protection systems are identified.

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4.4.6. Notes for Facilitation

- Summarize the important points and terms explained in the session.
- Ask participants if they have any doubts. Encourage them to ask questions.
- Answer questions, as needed, providing concrete and brief answers.
- Tell participants to complete the questions at the end of the unit.
- Ensure that every participant answers all the questions.

4.4.7. Summary

Identification of Fall Protection Types

The person can identify and select the appropriate types of fall protection for various scaffolding components, including guardrails, personal fall arrest systems (PFAS), tie-offs, supports, and ladders. All these systems serve as a deterrent to fall and assure that workers are restrained. Meanwhile, scaffold stability is maintained during elevated work. In this case, ladder fall protection consists of ladder tie-offs and cages.

Determining Fall Protection Needs for Tasks

The person would now determine and calculate how much fall protection really is needed for different scaffolding activities. This would require knowing the specific need based on the activity's nature, height of scaffold, and equipment. Must determine the effectiveness of the selected fall protection systems so that they are suitable and dependable for the given task to ensure they provide adequate safety for the worker.

4.4.8. Exercise

1. Which of the following is NOT a type of fall protection for scaffolds?

a) Guardrails

b) Personal fall arrest systems (PFAS)

c) Ladders

d) Safety nets

2. What should be considered when determining the fall protection requirements for a scaffold?

a) The height of the scaffold and the task being performed

b) The colour of the scaffold

c) The material used for the scaffold only

d) The time of day when the work is performed

3. For scaffolds, a common fall protection system includes _____, which are installed along the edges to prevent workers from falling off the platform.

4. When working on a scaffold at heights greater than _____ feet, a personal fall arrest system (PFAS) is typically required.

5. True or False: The effectiveness of a fall protection system is determined by the height of the scaffold and the worker's activity.

6. True or False: Ladders do not require any form of fall protection when used in scaffolding work.

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5. Unit 5 NOS 4: SSD/VSQ/N0208: Advance Scaffold Inspection and Documentation

5.1. Key Learning Outcomes

At the end of this module, the trainees will be able to

- **Safety and Design check during inspection to prevent any accident during its use.**
- **Inspection of scaffold after erection before opening for use.**
- **Documents to be prepared and maintained in scaffold inspection.**

5.2. Unit 5.1: Safety & Design check

5.2.1. Unit Objectives

At the end of this unit, students will be able to:

- Checking whether the scaffold is as per design and drawings.
- Checking Safety measures provided in scaffold preparation as per design and drawings.
- Briefing and display for proper uses of scaffold to users.

5.2.2. Resources

- Whiteboard, erasable marker, board cleaner, projection screen, laptop, speaker, notebook, pen, participant handbook, etc
- Flip chart
- Participant Manual
- Projection screen and PowerPoint presentations.
- Activities (role plays)

5.2.3. Say

- Describe about how to Check whether the scaffold is as per design and drawings
- Describe how to Safety measures provided in scaffold preparation as per design and drawings
- Describe Briefing and display for proper uses of scaffold to users

5.2.4. Explain

- Describe about how to Check whether the scaffold is as per design and drawings
- Describe how to Safety measures provided in scaffold preparation as per design and drawings
- Describe Briefing and display for proper uses of scaffold to users

5.2.5. Activity

Task: Divide participants into small groups (3-4 people per group). Each group will:

Receive a scaffold design drawing and a model or image of a scaffold (this could be a physical scaffold or a detailed diagram).

Review the scaffold design and check the physical scaffold (or image/model) for compliance with the drawing.

Use a scaffold safety checklist (covering critical aspects like height, width, stability, tie-offs, supports, platforms, and guardrails) to assess the structure.

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Instructions: Ask groups to identify any discrepancies between the design and the scaffold setup. Have them note down areas that need adjustments to ensure safety.

5.2.6. Notes for Facilitation

- Summarize the important points and terms explained in the session.
- Ask participants if they have any doubts. Encourage them to ask questions.
- Answer questions, as needed, providing concrete and brief answers.
- Tell participants to complete the questions at the end of the unit.
- Ensure that every participant answers all the questions.

5.2.7. Summary

Checking Whether the Scaffold is Built According to Design and Drawings

To ensure safety and compliance, scaffolds must be constructed in line with approved design drawings. This means verifying the dimensions, structural components, and alignment of the scaffold to confirm they adhere to the technical specifications. Regular inspections should be carried out to spot any differences between the scaffold setup and the original design.

Verifying Safety Measures Implemented in Scaffold Preparation According to Design and Drawings

It is vital to incorporate proper safety measures into the scaffold to prevent accidents. This includes checking for the installation of safety features such as guardrails, toe boards, tie-offs, secure access points (like ladders or stairs), and load-bearing capacity, all of which should conform to the design. Additionally, these safety measures must comply with legal and industry standards for scaffold usage.

Educating Users on Proper Scaffold Usage

Providing workers with clear instructions on how to safely use scaffolds is essential. This involves briefing them on the correct methods for accessing scaffolds, the use of personal protective equipment (PPE), the maximum load capacity, and safety precautions to prevent accidents. Clear signage and instructions should also be displayed on-site to remind workers of safe practices and guidelines.

5.2.8. Exercise

1.What is the first step in ensuring scaffold safety?

A) Checking scaffold material quality

B) Checking whether the scaffold is as per design and drawings

C) Ensuring workers wear PPE

D) Checking the scaffold height

2.Which of the following safety measures should be checked in scaffold preparation according to the design?

A) Proper access points

B) Correct scaffold height

C) Safety barriers and guardrails

D) All of the above

3.The first step in ensuring the safety and stability of a scaffold is to check whether the scaffold is built according to the _____ and _____.

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4.When checking a scaffold's safety measures, it is important to confirm that safety barriers, guardrails, and _____ are in place according to the design.

5.A scaffold should only be used if it has been properly _____ and checked against the design and safety guidelines.

5.3. Unit 5.2 Inspection Process

5.3.1. Unit Objectives

At the end of this unit, students will be able to:

- Follow the step wise process of Inspection.
- Checking each of inspection points of the scaffold.
- Compliances of all inspection points and prepare inspection report.

5.3.2. Resources

- Whiteboard, erasable marker, board cleaner, projection screen, laptop, speaker, notebook, pen, participant handbook, etc
- Flip chart
- Participant Manual
- Projection screen and PowerPoint presentations.
- Activities (role plays)

5.3.3. Say

- Describe about the step wise process of Inspection
- Describe about Checking of inspection points of the scaffold.
- Describe Compliances of all inspection points and prepare inspection report.

5.3.4. Explain

- Describe about the step wise process of Inspection
- Describe about Checking of inspection points of the scaffold.
- Describe Compliances of all inspection points and prepare inspection report.

5.3.5. Activity

Divide the participants into small groups (3-4 people per group). Each group will:

- Receive a scaffold model (physical or image) and an inspection checklist.
- Follow the stepwise process of inspection:
  - **Step 1:** Visual Inspection – Check for obvious signs of damage, wear, or instability in the scaffold structure.
  - **Step 2:** Detailed Inspection – Examine specific components such as guardrails, tie-offs, platforms, supports, access points, and load-bearing capacity.
  - **Step 3:** Compliance Check – Ensure the scaffold meets all design requirements (based on provided design drawings and safety standards).
- As they inspect, the groups should make notes of any findings, discrepancies, or safety concerns.

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5.3.6. Notes for Facilitation

- Summarize the important points and terms explained in the session.
- Ask participants if they have any doubts. Encourage them to ask questions.
- Answer questions, as needed, providing concrete and brief answers.
- Tell participants to complete the questions at the end of the unit.
- Ensure that every participant answers all the questions.

5.3.7. Summary

Follow a Step-by-Step Inspection Process

The inspection process starts with a systematic, step-by-step approach. This method ensures that every aspect of the scaffold is thoroughly examined, including visual checks, detailed structural evaluations, and compliance assessments. A clear process helps to spot any issues early on, ensuring the scaffold remains safe for use.

Evaluating Each Inspection Point of the Scaffold

Inspectors need to carefully assess specific components of the scaffold, such as guardrails, platforms, tie-offs, load-bearing capacity, and access points. Each part of the scaffold should be inspected for damage, wear, or potential hazards. This comprehensive evaluation guarantees that all elements of the scaffold adhere to safety standards and operate as intended.

Ensuring Compliance of All Inspection Points and Creating an Inspection Report

Once the inspection is complete, it's crucial to confirm that the scaffold complies with all design and safety requirements. Any instances of non-compliance, issues, or hazards should be recorded. An inspection report must then be compiled, summarizing the findings, identifying any risks, and recommending corrective measures. This report acts as an official record of the inspection and supports the maintenance of safety protocols..

5.3.8. Exercise

1.What is the first step in the scaffold inspection process?

a) Preparing the inspection report

b) Checking compliance with safety standards

c) Following a stepwise inspection approach

d) Inspecting the scaffold for damage

2. Which of the following is NOT typically an inspection point when checking a scaffold?

a) Guardrails

b) Scaffold base stability

c) Personnel work attire

d) Tie-off points

3. An inspection report should only include the inspection points that were found to be compliant. (T/F)

4.The primary goal of a scaffold inspection is to identify any safety hazards or structural issues that could lead to accidents.(T/F)

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5.An inspection report should include the steps taken to inspect the scaffold, findings, and any necessary corrective actions.(T/F)

5.4. Unit 5.3 : Documentation

5.4.1. Unit Objectives

At the end of this unit, students will be able to:

- Preparation and maintenance of documents as per inspection process.
- Providing the inspection report to concerned official

5.4.2. Resources

- Whiteboard, erasable marker, board cleaner, projection screen, laptop, speaker, notebook, pen, participant handbook, etc
- Flip chart
- Participant Manual
- Projection screen and PowerPoint presentations.
- Activities (role plays)

5.4.3. Say

- Describe about Preparation and maintenance of documents as per inspection process
- Describe inspection report

5.4.4. Explain

- Describe about Preparation and maintenance of documents as per inspection process
- Describe inspection report

5.4.5. Activity

- Divide participant into group
- Provide each group with a list of scaffolding components, checklists & check them against inspection points on checklist
- Have group discussion deficiencies they find
- Document their class discussion to compare finding and reinforce key inspection points.

5.4.6. Notes for Facilitation

- Summarize the important points and terms explained in the session.
- Ask participants if they have any doubts. Encourage them to ask questions.
- Answer questions, as needed, providing concrete and brief answers.
- Tell participants to complete the questions at the end of the unit.
- Ensure that every participant answers all the questions.

5.4.7. Summary

Documentation Preparation and Maintenance in inspection process

Effective documentation is vital for monitoring scaffolding condition, recognize any deficiencies and ensuring that corrective measures are implemented.

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It involves development & management of documents, including inspection checklist and inspection report

It highlights significance of diligent record keeping during scaffolding inspection

Submission of inspection report to concerned official

Following completion of an scaffold inspection ,basic scaffold inspector must provide report to appropriate authority

Timely reporting ensure that any identified issues are addressed effectively

It highlights significance of timely communication of inspection results to promptly take corrective action

5.4.8. Exercise

1.Which of the following is required for maintaining inspection documents?

a) Storing the documents in any available folder

b) Preparation and maintenance of documents as per the inspection process

c) Ignoring inspection reports once the process is complete

d) Keeping inspection documents in a public place

2.What is the purpose of maintaining inspection documents?

a) To ensure all equipment is washed regularly

b) To track compliance and inspection details

c) To prevent future inspections

d) To hide inspection results

3.It is not necessary to follow any specific guidelines while preparing and maintaining inspection documents.

4.Inspection documents are useful for tracking compliance with regulatory standards.

5.The preparation and maintenance of inspection documents must be done according to the _____ process.

6. After the inspection, the _____ is responsible for receiving and reviewing the inspection report.

7. To ensure competence, an individual must be able to prepare and maintain documents _____ the inspection process.

6. Unit 6 NOS 5: SSD/VSQ/N0209: Advance International Practices and Designs in Scaffoldings

6.1. Key Learning Outcomes

- International practices in design of scaffolds.
- International standard, codes and drawings in scaffolding .
- Inspection and documents preparation in inspection

6.2. Unit 5.1. Standards & Design of Scaffolds

6.2.1. Unit Objectives

At the end of this unit, students will be able to:

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To understand and apply international design codes and practices, such as BS EN-12810/11/12, EN 74, NASC - TG20-13, SG4-10, SG6, and OSHA standards, for the design and construction of scaffolds

To familiarize oneself with international best practices for scaffolding design and safety, followed in regions such as the UK, Europe, USA, Australia, and Gulf countries, and to implement these practices accordingly

Verification of the design details of scaffolds concerning the associated international standards of design with respect to the structural security and safety of the scaffold system.

6.2.2. Resources

- Whiteboard, erasable marker, board cleaner, projection screen, laptop, speaker, notebook, pen, participant handbook, etc
- Flip chart
- Participant Manual
- Projection screen and PowerPoint presentations.
- Activities (role plays)

6.2.3. Say

- Describe about BS EN-12810/11/12, EN 74, NASC - TG20-13, SG4-10, SG6, and OSHA standards, for the design and construction of scaffolds
- Describe about with international best practices for scaffolding design and safety
- Describe about Verification process of the design details of scaffolds concerning the associated international standards of design with respect to the structural security and safety of the scaffold system

6.2.4. Explain

- Describe about BS EN-12810/11/12, EN 74, NASC - TG20-13, SG4-10, SG6, and OSHA standards, for the design and construction of scaffolds
- Describe about with international best practices for scaffolding design and safety
- Describe about Verification process of the design details of scaffolds concerning the associated international standards of design with respect to the structural security and safety of the scaffold system

6.2.5. Activity

Reading Scaffold Drawings:

Hand out printed scaffold drawings (or project them on a screen). Provide a variety of drawings with different levels of complexity (from simple to more detailed designs).

Ask participants to identify key features such as dimensions, material types, scaffold components (e.g., base plates, support bars), and safety elements.

Discuss the drawings as a group, and ensure that everyone understands the components and their significance. Answer any questions about how to read the drawing symbols or interpret annotations.

Group Discussion:

Have participants work in pairs or small groups to go over a scaffold drawing and identify all key elements.

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Once each group is ready, ask them to present their findings and explain how they interpreted the drawing..

6.2.6. Notes for Facilitation

Summarize the important points and terms explained in the session.

- Ask participants if they have any doubts. Encourage them to ask questions.
- Answer questions, as needed, providing concrete and brief answers.
- Tell participants to complete the questions at the end of the unit.
- Ensure that every participant answers all the questions

6.2.7. Summary

- BS EN-12810/11/12 & EN 74 (Europe): These standards outline the design requirements for facade scaffolds and their components, such as couplers, to ensure safety and stability.
- NASC - TG20-13 (UK): This document offers guidelines for scaffold design, emphasizing structural stability and material specifications.
- SG4-10, SG6 (UK): SG4-10 provides safety guidelines for assembling scaffolds, while SG6 focuses on safety in scaffold design, ensuring worker protection during both the erection and use of scaffolds.
- OSHA (USA - 29 CFR 1926.451): This regulation defines the safety and design requirements for scaffolds in the United States, addressing load-bearing capacity, safety systems, and worker protection during scaffold operations.
- UK/Europe: Scaffold design in the UK and Europe is often governed by a combination of BS EN standards and NASC guidelines, focusing on both safety and functional design to meet the specific needs of different work environments.
- USA: OSHA standards in the United States provide comprehensive safety requirements for scaffolding, including worker training, scaffold inspection, and load capacity specifications to reduce the risk of falls and other accidents.
- Australia: Australia adheres to the AS/NZS 1576 standards for scaffold design, focusing on material strength, worker safety, and ensuring that scaffold structures can withstand environmental factors like wind.
- Gulf Countries: Scaffold regulations in Gulf countries are influenced by international standards like BS and OSHA, with a focus on ensuring worker safety in extreme environmental conditions and high-rise construction.
- Reviewing the scaffold design to ensure it meets load-bearing capacity, material specifications, and dimensional requirements according to international standards.
- Making sure that safety features, including guardrails, tie-offs, and fall protection systems, are effectively incorporated into the scaffold design.
- Checking the stability of the scaffold system to confirm it can endure environmental factors such as wind, and evaluating whether the design adheres to national and international regulatory standards.

6.2.8. Exercise

1. Which of the following standards provide guidelines for the design of scaffolds in the UK and Europe?

a) BS EN-12810/11/12

b) OSHA (29 CFR 1926.451)

c) SG4-10

d) NASC - TG20-13

2. What does the standard EN 74 primarily focus on?

a) Scaffold material strength

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b) Scaffold component connections

c) Safety procedures during scaffold erection

d) Scaffold load-bearing capacities

3. The BS EN-12810/11/12 standards are widely used for the design and construction of _____ scaffolds in the UK and Europe.

4. EN 74 primarily addresses the design of _____ components used in scaffolding systems.

5. According to NASC - TG20-13, scaffold designs must adhere to specific _____ and _____ requirements for structural integrity.

6. The OSHA (29 CFR 1926.451) standard focuses on providing safety guidelines for _____ working with scaffolds.

7. When checking scaffold designs, one must ensure the scaffold is compliant with _____ and _____ to ensure safety.

8. A key aspect of checking design details involves verifying the scaffold's _____ capacity, stability, and compliance with relevant regulations.

6.3. Unit 5.2. Drawings & International Practices

6.3.1. Unit Objectives

At the end of this unit, students will be able to:

- To develop the ability to read, understand, and interpret scaffold drawings based on international standards and conventions, ensuring accurate understanding of design details.
- To assist in the preparation of scaffold drawings, ensuring they are created in accordance with international conventions, standards, and best practices for scaffold design and safety.

6.3.2. Resources

- Whiteboard, erasable marker, board cleaner, projection screen, laptop, speaker, notebook, pen, participant handbook, etc
- Flip chart
- Participant Manual
- Projection screen and PowerPoint presentations.
- Activities (role plays)

6.3.3. Say

- Describe about how to interpret scaffold drawings based on international standards and conventions, ensuring accurate understanding of design details.
- Describe about process of preparation of scaffold drawings

6.3.4. Explain

- Describe about how to interpret scaffold drawings based on international standards and conventions, ensuring accurate understanding of design details.
- Describe about process of preparation of scaffold drawings

6.3.5. Activity

Divide the class into groups or assign individual tasks.

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Provide each student or group with a scaffold design scenario, including details like the type of scaffold (e.g., mobile scaffold, supported scaffold), the intended load capacity, and the site's specifications.
Provide reference materials such as international scaffold design standards (e.g., BS EN-12810, OSHA) to guide their design.
Designing the Scaffold Drawing
Students will work on creating the scaffold drawing, considering all components (scaffold tubes, joints, platforms, etc.), ensuring that it complies with international standards.
They should include key details such as the height, dimensions, load requirements, and safety measures (e.g., guardrails, planks, toe boards).
If working with digital software, they can utilize tools like CAD programs to create the drawing.
Presentation and Feedback
Each student or group will present their scaffold drawing to the class, explaining the design choices, safety measures, and how the drawing complies with international standards.
The instructor will provide feedback on the accuracy, safety considerations, and adherence to standards.
Discussion
Encourage a discussion where students can compare their designs and discuss the challenges they encountered in preparing the drawings.
The instructor will highlight common mistakes, such as missing safety features, incorrect dimensions, or failure to follow standards, and guide students on how to improve their designs.
Conclusion
Recap the process of preparing scaffold drawings and the importance of adhering to international conventions and safety standards.
Discuss how accurate scaffold drawings are essential for ensuring safety on construction sites.
Provide resources for further learning and offer additional support if needed.

6.3.6. Notes for Facilitation

Summarize the important points and terms explained in the session.

- Ask participants if they have any doubts. Encourage them to ask questions.
- Answer questions, as needed, providing concrete and brief answers.
- Tell participants to complete the questions at the end of the unit.
- Ensure that every participant answers all the questions

6.3.7. Summary

Reading, Understanding, and Interpreting International Scaffold Drawings

To be proficient in this field, a person must be able to read and interpret scaffold drawings according to international standards. These standards include guidelines from organizations like the BS EN series (e.g., BS EN-12810/11/12), OSHA (Occupational Safety and Health Administration), and various other international scaffolding codes. It's essential for individuals to be familiar with common symbols, dimensions, and technical specifications used in scaffold design, such as tube sizes, bracing patterns, and guardrail placements. This knowledge is crucial for ensuring that the scaffold is safe and meets the necessary structural integrity and safety regulations for workers.

Helping in the Preparation of Scaffold Drawings

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Beyond interpreting scaffold drawings, individuals should also be capable of assisting in the creation and preparation of these drawings in line with international conventions and best practices. This includes designing scaffolds that adhere to established standards, ensuring they are safe and able to support the required loads. The process involves selecting suitable materials, designing the layout, calculating load-bearing capacities, and incorporating safety features like guardrails and ladders. By adhering to international conventions, scaffold drawings promote consistency and safety across projects, whether they are in the UK, USA, Australia, or other regions.

6.3.8. Exercise

1. Which international standard is primarily used for the design of scaffolding systems in the UK and Europe?

a) OSHA

b) BS EN-12810/11/12

c) AS/NZS 1576

d) ANSI

2. What is the primary purpose of interpreting international scaffold drawings?

a) To determine material costs

b) To ensure proper scaffold construction and safety

c) To estimate the time for scaffold construction

d) To select tools for the job

3. Which of the following is an essential component in international scaffold drawings to ensure worker safety?

a) Scaffold height only

b) Material cost estimation

c) Safety measures such as guardrails and fall protection

d) Number of scaffolding workers

4. BS EN-12810/11/12 is a set of standards used in _____ for the design and construction of scaffolding systems.

5. Scaffold drawings typically include details such as dimensions, material specifications, safety features like _____ and fall protection systems.

6. One key practice in preparing scaffold drawings is to ensure that all components meet the requirements outlined in _____ and safety standards

6.4. Unit 5.3. Inspection & Documents Preparation

6.4.1. Unit Objectives

At the end of this unit, students will be able to:

- . To prepare for and carry out scaffold inspections, ensuring compliance with relevant codes, standards, and safety practices for structural integrity and worker safety.
- To prepare and maintain accurate documentation in line with regional practices and standards, ensuring proper reporting of scaffold inspections, assessments, and compliance.

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6.4.2. Resources

- Whiteboard, erasable marker, board cleaner, projection screen, laptop, speaker, notebook, pen, participant handbook, etc
- Flip chart
- Participant Manual
- Projection screen and PowerPoint presentations.
- Activities (role plays)

6.4.3. Say

- Describe about process of scaffold inspections, ensuring compliance with relevant codes, standards, and safety practices for structural integrity and worker safety.
- Describe about documentation of scaffold inspections

6.4.4. Explain

- Describe about process of scaffold inspections, ensuring compliance with relevant codes, standards, and safety practices for structural integrity and worker safety.
- Describe about documentation of scaffold inspections

6.4.5. Activity

Provide participant with a hypothetical scaffold inspection scenario. For example, the scaffold has several safety issues or is fully compliant.

participant should prepare a sample inspection report based on the checklist and their findings. The report should include:

Date and location of the inspection

Description of the scaffold and its components

Findings from the inspection (including any issues)

Recommendations for corrective action

Signature and role of the inspector

Group Review

participant will exchange their reports with another group for review. The reviewer will assess whether the document is comprehensive, clear, and correctly formatted according to regional standards.

6.4.6. Notes for Facilitation

Summarize the important points and terms explained in the session.

- Ask participants if they have any doubts. Encourage them to ask questions.
- Answer questions, as needed, providing concrete and brief answers.
- Tell participants to complete the questions at the end of the unit.
- Ensure that every participant answers all the questions

6.4.7. Summary

Preparation & Carrying Out Inspections According to Relevant Codes & Practices

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To be effective in this field, an individual must be capable of preparing for and conducting scaffold inspections that comply with established industry codes and standards. This includes evaluating the scaffold's structural integrity, confirming it meets safety requirements, and identifying any potential hazards that could endanger worker safety. The inspector should be well-versed in various international and regional standards (such as OSHA, BS EN, or local regulations) and apply them during scaffold evaluations. Inspections should concentrate on essential elements such as the condition of scaffold components, load-bearing capacity, safety features (guardrails, planks), and overall stability.

Document Preparation According to Regional Practices and Reporting

Beyond performing inspections, individuals must also be skilled in preparing thorough and accurate documentation that aligns with regional standards. This documentation is vital for reporting inspection findings, highlighting any issues, and suggesting corrective measures. Effective reporting guarantees adherence to local and international safety regulations and acts as an official record for future reference. The documentation process involves creating clear, concise inspection reports, following the appropriate format and procedures set by the relevant authorities in the region, and ensuring timely submission of reports for further action.

6.4.8. Exercise

1. Which of the following is a critical part of preparing for scaffold inspection?

a) Estimating worker wages

b) Familiarizing with local and international inspection codes

c) Choosing the type of scaffold to be used

d) Deciding the scaffold colour

2. What is the main purpose of preparing documents related to scaffold inspection?

a) To ensure compliance with local regulations and provide evidence of inspection

b) To calculate the cost of materials used in scaffolding

c) To determine the number of workers required

d) To select tools for the scaffold assembly

3. The preparation of documents related to scaffold inspections is essential for _____ the inspection process and ensuring compliance with local regulations.

4. To carry out a proper scaffold inspection, the individual must be familiar with both local and _____ practices regarding scaffold safety and structural integrity.

7. Unit 6 NOS 5: SSD/VSQ/N0210: Plan, Organize & Monitor

7.1. Key Learning Outcomes

- Planning of resources for own work and communication to concerned subordinates, co-workers, and superiors.
- Provide necessary support to subordinates, coordinate with co-workers and liaise with superiors and other teams.
- Monitor progress of work and adjust, manage, or project requirements on time.

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7.2. Unit 6.1: Planning of Work

7.2.1. Unit Objectives

At the end of this unit, students will be able to:

- Understand process of plan the resources, schedules, and timelines as per work timelines given by superiors.
- Understand hierarchy of the organization and communicate to concerned co workers and superiors.
- Understand how to do work within timelines.

7.2.2. Resources

- Whiteboard, erasable marker, board cleaner, projection screen, laptop, speaker, notebook, pen, participant handbook, etc
- Flip chart
- Participant Manual
- Projection screen and PowerPoint presentations.
- Activities (role plays)

7.2.3. Say

- Describe resource allocation and resource schedule
- Describe process of hierarchy of the organization and communicate to concerned co workers and superiors.
- Describe Task allocation and timeline

7.2.4. Explain

- Describe resource allocation and resource schedule
- Describe process of hierarchy of the organization and communicate to concerned co workers and superiors.
- Describe Task allocation and timeline

7.2.5. Activity

Planning of Work

- **Objective**: To understand the process of work planning, including resource allocation, schedule management, and effective communication, while simulating real-world workplace scenarios.
- **Activity Setup**:
  - Divide the class into small groups (4-5 students per group).
  - Provide each group with a **hypothetical project scenario** (e.g., a construction project, event planning, manufacturing task, or research project) that involves tasks to be completed within a set timeframe.
  - Provide **planning tools**, such as:
    - A **Gantt chart template** or **work schedule template**.
    - A **resource list** (e.g., equipment, personnel, materials).
    - A **project timeline** that outlines the total time available and key milestones.

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- **Instructions**:

1. **Scenario Overview**:

- Present each group with a detailed scenario of a project or task. For example, for a construction project, the scenario might include building a new office space within three months, with specific deadlines for tasks like foundation laying, electrical installation, and final inspection.
- Emphasize that each group must plan the resources, schedule, and timelines effectively to complete the project successfully.

2. **Work Breakdown**:

- Each group should **break down the overall project** into smaller, manageable tasks or phases. For instance:
- **Task 1**: Site preparation and foundation laying.
- **Task 2**: Framing and structure work.
- **Task 3**: Electrical wiring installation.
- **Task 4**: Final inspection and project handover.
- Assign responsibilities for each task (e.g., which team member or department will handle which task).

3. **Resource Allocation**:

- Identify the resources required for each task:
- **Personnel**: Who will do what (e.g., skilled workers, managers, supervisors)?
- **Equipment**: What tools or machinery are needed?
- **Materials**: What materials (e.g., wood, cement, wiring) are required for the project?
- Groups should allocate resources for each task, ensuring that the necessary items are available at the right time.

4. **Timeline Creation**:

- Using a **Gantt chart** or **work schedule**, groups must map out when each task will begin and end, taking into account dependencies (e.g., Task 2 cannot start until Task 1 is completed).
- Ensure that they account for any potential delays, allowing some buffer time between tasks or key milestones.

5. **Communication Plan**:

- Develop a **communication plan** to ensure all team members and stakeholders are informed about the work schedule and progress.
- Decide how to communicate with superiors or other departments (e.g., regular progress reports, meetings).
- Discuss how changes to the schedule or issues will be communicated and resolved.

6. **Risk Assessment**:

- Identify potential **risks** to the successful completion of the project (e.g., delays in material delivery, workforce shortages).
- Plan **mitigation strategies** to address these risks (e.g., backup suppliers, additional shifts, contingency time in the schedule).

7. **Presentation**:

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- Each group presents their **work plan** to the class, including:
- Breakdown of tasks and milestones.
- Resource allocation plan.
- Timeline and Gantt chart.
- Communication strategy and risk management plan.
- After each presentation, encourage questions and feedback from the class on how the plan could be improved.

- **Discussion**:
  - Discuss the importance of **effective work planning** in completing projects on time and within budget.
  - Emphasize the role of **resource management**, **timeline adherence**, and **communication** in the success of any project.
  - Discuss how unplanned risks or delays can affect the overall work plan and how to manage those risks proactively.
- **Conclusion**:
  - Recap the essential components of **work planning**, including task breakdown, resource allocation, timeline management, and communication.
  - Reinforce that planning is a critical skill for any professional and helps ensure that projects are completed efficiently, safely, and successfully.
  - Encourage students to always consider potential risks and communication needs while planning work in real-world situations.

7.2.6. Notes for Facilitation

Summarize the important points and terms explained in the session.

- Ask participants if they have any doubts. Encourage them to ask questions.
- Answer questions, as needed, providing concrete and brief answers.
- Tell participants to complete the questions at the end of the unit.
- Ensure that every participant answers all the questions

7.2.7. Summary

1. Resource and Schedule Planning:

Plan resources, schedules, and timelines based on work deadlines set by superiors.

2. Understanding Organizational Hierarchy:

Understand the hierarchy within the organization.

Communicate effectively with co workers and superiors according to the organizational structure.

3. Task Delegation:

Assign tasks to subordinates in alignment with project requirements and timelines.

7.2.8. Exercise

1. What is the first step in planning safety resources for a work task?

A) Gathering feedback from team members

B) Reviewing the overall work timelines and objectives

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C) Conducting a financial audit

D) Allocating tasks to subordinates

2. What is the primary purpose of resource planning?

A) To allocate tasks to employees

B) To minimize costs

C) To ensure resources are available when needed

D) To increase profit margins

3. Which document typically outlines the project schedule?

A) Project charter

B) Statement of work

C) Project management plan

D) Risk management plan

4. Which term describes the resources needed to complete a project?

A) Resource pool

B) Resource allocation

C) Resource capacity

D) Resource requirement

5. True or False: In work planning, it is essential to consider worker skill levels and ensure adequate training for the tasks they will perform.

6. True or False: Work planning should avoid including safety protocols if the tasks seem simple or low-risk.

7. True or False: A detailed work plan helps in minimizing delays, reducing accidents, and increasing productivity.

7.3. Unit 6.2: Organizing of Work

7.3.1. Unit Objectives

At the end of this unit, students will be able to:

- Resource collection and provisioning.
- Understand Communication Medium to concerned co workers and superiors.
- Briefing to subordinates about the schedule, sequence, timing and resources to subordinates

7.3.2. Resources

- Whiteboard, erasable marker, board cleaner, projection screen, laptop, speaker, notebook, pen, participant handbook, etc
- Flip chart
- Participant Manual
- Projection screen and PowerPoint presentations.
- Activities (role plays)

7.3.3. Say

- Describe Resource collection and provisioning

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- Describe process of hierarchy of the organization and communicate to concerned co workers and superiors.
- Describe process of Briefing to subordinates about the schedule, sequence, timing and resources to subordinates

7.3.4. Explain

- Describe Resource collection and provisioning
- Describe process of hierarchy of the organization and communicate to concerned co workers and superiors.
- Describe process of Briefing to subordinates about the schedule, sequence, timing and resources to subordinates

7.3.5. Activity

Walk through the key elements of creating ergonomics training content:

Introduction to Ergonomics: Overview, common ergonomic hazards, and their impact.

Risk Identification: How to identify ergonomic hazards in the workplace.

Practical Solutions: Demonstration of ergonomic principles and best practices (e.g., proper workstation setup, posture, material handling).

Preventive Measures: Actionable steps employees can take to reduce injury risks.

Group Exercise:

Based on the training needs identified earlier, have each group design a section of the ergonomics safety training program. They should:

Select a specific topic (e.g., workstation setup, lifting techniques, posture correction).

Develop training materials (slides, handouts, demonstrations, or videos).

Plan how they will present the information (lecture, demonstration, role-playing).

Outcome:

Groups will present their training materials and explain how they would deliver their segment in a training session.

7.3.6. Notes for Facilitation

Summarize the important points and terms explained in the session.

- Ask participants if they have any doubts. Encourage them to ask questions.
- Answer questions, as needed, providing concrete and brief answers.
- Tell participants to complete the questions at the end of the unit.
- Ensure that every participant answers all the questions

7.3.7. Summary

1.Resource Collection and Provisioning:

Collect and provide necessary resources for the tasks at hand.

2.Effective Communication:

Communicate relevant information to co-workers and superiors.

3.Briefing Subordinates:

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Brief subordinates about the work schedule, task sequence, timing, and available resources.

7.3.8. Exercise

1. What is the primary purpose of resource collection in project management?

A) To allocate tasks

B) To gather necessary materials and inputs

C) To create budgets

D) To schedule meetings

2. What is the first step in resource collection?

A) Allocation of resources

B) Identifying resource needs

C) Distribution of resources

D) Evaluation of resources

3. What is the first step in the resource provisioning process?

A) Allocating resources

B) Identifying resource requirements

C) Monitoring resource usage

D) Reporting resource status

4. What is the best way to ensure your message is understood by co-workers?

A) Use technical jargon

B) Keep the message concise and clear

C) Avoid summarizing key points

D) Speak quickly

5.True or False: It is not necessary to assign clear responsibilities for safety and emergency procedures when organizing work.

6.True or False: Organizing work includes scheduling tasks in a way that optimizes productivity without compromising safety.

7.True or False: Organizing work should only focus on the efficiency of the process and not on the health and safety of the workers.

7.4.Unit 6.3: Monitoring of Work

7.4.1. Unit Objectives

At the end of this unit, students will be able to:

- Understand process of monitoring progress of work, management of resources, guidance to subordinates.
- Understand process of reporting to superiors and keeping the other teams informed.
- Documentations and compliances and report submission.

7.4.2. Resources

- Whiteboard, erasable marker, board cleaner, projection screen, laptop, speaker, notebook, pen, participant handbook, etc

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- Flip chart
- Participant Manual
- Projection screen and PowerPoint presentations.
- Activities (role plays)

7.4.3. Say

- Describe about process of monitoring progress of work, management of resources, guidance to subordinates
- Describe about process of reporting to superiors and keeping the other teams informed
- Describe importance of Documentations and compliances and report submission

7.4.4. Explain

- Describe about process of monitoring progress of work, management of resources, guidance to subordinates
- Describe about process of reporting to superiors and keeping the other teams informed

Describe importance of Documentations and compliances and report submission

7.4.5. Activity

Discuss how to analyse and interpret the collected data to evaluate the effectiveness of the ergonomics safety program:

Comparing pre- and post-training data (e.g., reduction in injuries after training).

Employee feedback: Using surveys and interviews to gauge employees' perceptions of the program.

Incident reports and injury data: Analysing trends in injury rates and correlating them with ergonomic practices.

Activity:

Using the data collected in Step 2, students will analyse the effectiveness of the ergonomics safety program. They will:

Review injury or incident data before and after implementing ergonomics changes.

Survey employees on their experiences with the ergonomics program (e.g., did they notice improvements in their comfort or productivity?).

Identify any gaps in the data and propose strategies for improving the program's monitoring process.

Outcome:

Groups will prepare a presentation with their findings on the program's effectiveness and the recommended improvements based on data analysis.

7.4.6. Notes for Facilitation

Summarize the important points and terms explained in the session.

- Ask participants if they have any doubts. Encourage them to ask questions.
- Answer questions, as needed, providing concrete and brief answers.
- Tell participants to complete the questions at the end of the unit.
- Ensure that every participant answers all the questions

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7.4.7. Summary

1. Track Progress:

Continuously monitor the progress of tasks and projects against set timelines and goals.

2.Ensure Compliance:

Ensure work is being carried out according to established procedures, safety standards, and quality guidelines.

3.Identify Issues:

Identify any delays, resource shortages, or obstacles and address them promptly.

4.Provide Support:

Offer assistance or guidance to team members as needed to ensure smooth workflow.

5.Report Status:

Regularly report work progress to superiors and stakeholder

7.4.8. Exercise

1.What role does leadership play in monitoring work?

A) It is irrelevant

B) It sets the tone for accountability and support

C) It complicates processes

D) It should be avoided

2. What is the primary purpose of monitoring progress in a project?

A) To assign blame for delays

B) To ensure tasks are completed on time and within budget

C) To ignore issues as they arise

D) To complicate project management

3. Which of the following is a key indicator of project progress?

A) Employee satisfaction

B) Milestone completion

C) Office atmosphere

D) Social media engagement

4.True or False: Organizing work should consider the availability of resources, including tools, materials, and equipment, to avoid delays or inefficiencies.

5. True or False: It is not necessary to assign clear responsibilities for safety and emergency procedures when organizing work.

6. True or False: Organizing work includes scheduling tasks in a way that optimizes productivity without compromising safety.

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8. Unit 7 NOS 6: SSD/VSQ/N0206: Work with Safety, Health and Environment

8.1. Key Learning Outcomes

- Safety measures to minimize any incident or accidents, use of personal safety equipment and emergency drills.
- Healthy habits, maintenance of clean and healthy area and healthy working relation among co workers and subordinate.
- Safe disposal of waste materials to minimize adverse effect on environment and reuse

8.2. Unit 7.1: Safety measures to minimize incidents or accidents at workplace

8.2.1. Unit Objectives

At the end of this unit, students will be able to:

- Identification of risks & hazards and emergency protocols at work site.
- Emergency evacuations processes in case of accidents, fires, or emergencies.
- Use of personal protective Equipment's by self & subordinates/co-workers.
- Storing & handling of tools, equipment & materials as per safety guidelines

8.2.2. Resources

- Whiteboard, erasable marker, board cleaner, projection screen, laptop, speaker, notebook, pen, participant handbook, etc
- Flip chart
- Participant Manual
- Projection screen and PowerPoint presentations.
- Activities (role plays)

8.2.3. Say

- Describe how to identify risks & hazards and emergency protocols at work site
- Describe process of Emergency evacuations
- Describe Use of personal protective Equipment's
- Describe process of Storing & handling of tools, equipment & materials as per safety guidelines

8.2.4. Explain

- Describe how to identify risks & hazards and emergency protocols at work site
- Describe process of Emergency evacuations
- Describe Use of personal protective Equipment's
- Describe process of Storing & handling of tools, equipment & materials as per safety guidelines

8.2.5. Activity

Divide the class into small groups and assign each group a specific workplace scenario (e.g., construction site, factory floor, office space).

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Each group will use a risk assessment checklist to identify potential risks and hazards in their scenario (e.g., exposed electrical wires, improper storage of materials, lack of signage).

The groups will also highlight emergency protocols to follow in case of specific hazards (e.g., fire drill procedures, first aid for injuries, evacuation routes).

Group Presentations

Each group will present their findings to the class, explaining the identified hazards and the relevant emergency protocols.

The instructor will provide feedback, emphasizing the importance of proactive hazard identification and the clarity of emergency procedures.

8.2.6. Notes for Facilitation

Summarize the important points and terms explained in the session.

- Ask participants if they have any doubts. Encourage them to ask questions.
- Answer questions, as needed, providing concrete and brief answers.
- Tell participants to complete the questions at the end of the unit.
- Ensure that every participant answers all the questions

8.2.7. Summary

Identification of Risks & Hazards and Emergency Protocols at Work Site

The first step in ensuring workplace safety is to identify potential risks and hazards that could result in accidents or injuries. These may include physical dangers like slippery floors, electrical issues, or equipment malfunctions. Additionally, it is essential for individuals to be aware of the emergency protocols for various situations, such as fires, chemical spills, or equipment failures. By recognizing these risks and understanding the appropriate emergency responses, workers can take preventive actions and respond quickly to minimize harm.

Emergency Evacuation Processes in Case of Accidents, Fires, or Emergencies

During an emergency, it is vital for employees to be well-versed in evacuation procedures to protect themselves and others. This involves knowing the exit routes, gathering at designated safe areas, and taking appropriate actions during different types of emergencies (e.g., fires, medical situations, or structural collapses). Regular training and drills enable workers to respond swiftly and effectively, reducing the impact of an emergency.

Use of Personal Protective Equipment (PPE) by Self & Subordinates/Co-workers

Personal protective equipment (PPE) plays a crucial role in safeguarding workers from hazards that cannot be eliminated through other means. Employees need to be skilled in using the right PPE, such as helmets, gloves, goggles, ear protection, and high-visibility clothing, to shield themselves from injuries. Furthermore, workers should promote and assist their co-workers in the correct use of PPE, fostering a culture of safety and responsibility throughout the workforce.

Storing & Handling of Tools, Equipment & Materials as per Safety Guidelines

Improper storage and handling of tools, equipment, and materials can result in accidents like trips, falls, or injuries from unsecured equipment. Workers must receive training on the correct methods for

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handling, storing, and maintaining tools and materials, following safety guidelines that prevent accidents.

8.2.8. Exercise

1.Which of the following is the first step in minimizing workplace accidents and incidents?

a) Reporting to authorities

b) Identifying risks and hazards at the work site

c) Conducting a safety meeting

d) Using personal protective equipment (PPE)

2.What is the primary purpose of emergency evacuation protocols at a work site?

a) To gather workers at a central location for meetings

b) To ensure the safety and orderly evacuation of all workers during emergencies

c) To protect equipment and tools during an accident

d) To monitor work progress during emergencies

3.Which of the following is considered an essential personal protective equipment (PPE) for scaffold workers?

a) Hard hats

b) Sunscreen

c) First aid kits

d) Work boots only

4.Personal protective equipment (PPE) includes items like helmets, gloves, and _____ to protect workers from injuries.

5.Storing and handling tools, equipment, and materials should always follow the prescribed _____ guidelines to prevent accidents.

6. _____ protective equipment should be worn by all workers to reduce the risk of injuries and accidents on the job.

8.3.Unit 7.2: Health of personnel & Work environment

8.3.1. Unit Objectives

At the end of this unit, students will be able to:

- **Identification of health hazards issues and area at work site.**
- **Ensuring of healthy and working area free from health hazards.**
- **Use of earmarked sanitation area & facilities.**
- **Ensuring good personal hygiene, sanitation habits, cleanliness, and safe disposal of wastes.**
- **Briefing subordinates on health, sanitation & cleanliness.**
- **Maintain healthy, easy, helping, and stress-free working environment among co-workers & subordinates.**

8.3.2. Resources

- Whiteboard, erasable marker, board cleaner, projection screen, laptop, speaker, notebook, pen, participant handbook, etc

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- Flip chart
- Participant Manual
- Projection screen and PowerPoint presentations.
- Activities (role plays)

8.3.3. Say

- **Describe about how to Identify health hazards issues and area at work site**
- **Describe process of Ensuring of healthy and working area free from health hazards**
- **Describe process how to Maintain healthy, easy, helping, and stress-free working environment among co-workers & subordinates.**

8.3.4. Explain

- **Describe about how to Identify health hazards issues and area at work site**
- **Describe process of Ensuring of healthy and working area free from health hazards**
- **Describe process how to Maintain healthy, easy, helping, and stress-free working environment among co-workers & subordinates.**

8.3.5. Activity

Task: Divide the class into small groups. Provide each group with a scenario or a workplace image that includes potential health hazards (e.g., a construction site, factory floor, or office setting).

Objective: Each group will identify the possible health hazards in the scenario (e.g., noise, poor ventilation, unsafe waste disposal, lack of sanitation facilities).

Discussion: Afterward, each group will share their findings with the class, discussing how these hazards can be mitigated to ensure a healthy work environment

8.3.6. Notes for Facilitation

Summarize the important points and terms explained in the session.

- Ask participants if they have any doubts. Encourage them to ask questions.
- Answer questions, as needed, providing concrete and brief answers.
- Tell participants to complete the questions at the end of the unit.
- Ensure that every participant answers all the questions

8.3.7. Summary

Identification of Health Hazards Issues and Area at Work Site

The first step in ensuring workplace health is to identify potential health hazards. These may include exposure to toxic substances, poor air quality, unsanitary conditions, or ergonomic risks. By pinpointing areas where these hazards are present, individuals can take the necessary steps to mitigate or eliminate them, creating a healthier environment for all employees

Ensuring a Healthy and Working Area Free from Health Hazards

After identifying health hazards, it is vital to take proactive measures to eliminate or control them. This involves improving ventilation, ensuring clean air, providing safe materials, and fostering a work

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environment that minimizes health risks. Regular inspections and maintenance of workplace conditions are essential to keep the environment free from potential health hazards.

Use of Earmarked Sanitation Area & Facilities

Proper sanitation facilities are crucial for maintaining health and hygiene in the workplace. Employees should be aware of and utilize designated sanitation areas, such as restrooms and wash stations, to ensure personal cleanliness and prevent the spread of illness. Keeping these areas well-maintained and accessible is key to overall workplace health

Ensuring Good Personal Hygiene, Sanitation Habits, Cleanliness, and Safe Disposal of Wastes

Workers need to uphold high standards of personal hygiene, which includes regular handwashing, cleanliness, and proper waste handling. Practicing good hygiene helps reduce the risk of illness and contamination. Furthermore, employees must ensure that waste disposal practices adhere to health and safety regulations, minimizing exposure to harmful substances and maintaining a clean working environment.

Briefing Subordinates on Health, Sanitation & Cleanliness

It is crucial to effectively communicate health and sanitation protocols to subordinates and co-workers. By regularly updating the team on the significance of hygiene, cleanliness, and health safety, everyone can work together to create a healthier environment. These briefings should address proper waste disposal, personal hygiene, and the use of sanitation facilities.

Maintain a Healthy, Easy, Helping, and Stress-Free Working Environment Among Co-workers & Subordinates

Creating a stress-free and supportive work environment is vital for the overall health and well-being of employees. Leaders should encourage a positive atmosphere by promoting open communication, offering support, and advocating for wellness practices. A calm and stress-free workplace not only boosts physical health but also enhances mental well-being, resulting in improved productivity and morale.

8.3.8. Exercise

1. Which of the following is the first step in minimizing workplace accidents and incidents?

a) Reporting to authorities

b) Identifying risks and hazards at the work site

c) Conducting a safety meeting

d) Using personal protective equipment (PPE)

2. What is the primary purpose of emergency evacuation protocols at a work site?

a) To gather workers at a central location for meetings

b) To ensure the safety and orderly evacuation of all workers during emergencies

c) To protect equipment and tools during an accident

d) To monitor work progress during emergencies

3. Which of the following is considered an essential personal protective equipment (PPE) for scaffold workers?

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a) Hard hats

b) Sunscreen

c) First aid kits

d) Work boots only

4. Personal protective equipment (PPE) includes items like helmets, gloves, and _____ to protect workers from injuries.

5. Storing and handling tools, equipment, and materials should always follow the prescribed _____ guidelines to prevent accidents.

6. _____ protective equipment should be worn by all workers to reduce the risk of injuries and accidents on the job.

8.4. Unit 7.3: Environment & disposal of waste

8.4.1. Unit Objectives

At the end of this unit, students will be able to:

- Take effective measures and apply methods to minimize the waste of materials during work processes.
- Properly carry waste and leftover materials to designated areas for re-use or disposal as per established
  protocols.
- Minimize the use of non-disposable plastic materials and ensure their proper disposal according to environmental guidelines..

8.4.2. Resources

- Whiteboard, erasable marker, board cleaner, projection screen, laptop, speaker, notebook, pen, participant handbook, etc
- Flip chart
- Participant Manual
- Projection screen and PowerPoint presentations.
- Activities (role plays)

8.4.3. Say

- Describe about process of effective measures and apply methods to minimize the waste of materials
- Describe about process of designated areas for re-use or disposal waste material
- Describe importance of Minimize the use of non-disposable plastic materials and ensure their proper disposal according to environmental guidelines..

8.4.4. Explain

- Describe about process of effective measures and apply methods to minimize the waste of materials
- Describe about process of designated areas for re-use or disposal waste material
- Describe importance of Minimize the use of non-disposable plastic materials and ensure their proper disposal according to environmental guidelines..

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8.4.5. Activity

Set up three different waste disposal bins: recyclable, non-recyclable, and plastic waste.
Explain how each type of waste should be sorted.
Provide materials such as plastic, metal, paper, and other leftover materials.
Hands-on Activity: Ask participants to sort the materials correctly into the designated bins, following proper protocols.
Discussion: Ask participants how they would carry and store leftover materials on-site and why proper disposal is necessary for re-use and environmental sustainability (PC12). Discuss the importance of following these protocols on actual work sites.

8.4.6. Notes for Facilitation

Summarize the important points and terms explained in the session.

- Ask participants if they have any doubts. Encourage them to ask questions.
- Answer questions, as needed, providing concrete and brief answers.
- Tell participants to complete the questions at the end of the unit.
- Ensure that every participant answers all the questions

8.4.7. Summary

Taking Measures & Methods to Minimize Waste of Materials

Minimizing material waste is crucial for maintaining cost-effectiveness and environmental responsibility on any worksite. This includes implementing strategies that reduce waste generation, such as optimizing material usage, reusing materials whenever possible, and adopting best practices in construction processes. Workers should be trained to manage resources efficiently and minimize waste by taking accurate measurements, reducing material scraps, and rethinking production methods to limit overconsumption of resources.

Carrying Waste & Left-over Materials as Per Protocol & in Earmarked Area for Re-use & Disposal

Proper waste handling is essential for keeping a clean and safe work environment. Workers must adhere to established protocols for collecting and transporting waste and leftover materials to designated areas for either re-use or safe disposal. This involves ensuring that materials are sorted based on their type (e.g., recyclable, non-recyclable, hazardous) and are disposed of or stored in designated zones according to environmental and safety standards. Accurate documentation and reporting of waste management practices are also vital to ensure compliance with safety and environmental regulations.

Minimum Use of Non-Disposable Plastic Material and Proper Disposal

Reducing the use of non-disposable plastic materials is important for sustainability. Non-disposable plastics, such as plastic wraps and containers, can cause long-term environmental harm due to their slow decomposition rates. Workers are encouraged to opt for alternatives to non-disposable plastics and to ensure that any plastic waste is properly sorted, recycled, or disposed of according to waste management protocols. By minimizing plastic usage and promoting eco-friendly alternatives, worksites can significantly lessen their environmental impact and contribute to broader sustainability goals.

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8.4.8. Exercise

1. What is one of the most effective ways to minimize material waste on a worksite?

a) Increasing material usage

b) Reusing materials wherever possible

c) Discarding unused materials

d) Ignoring the waste disposal process

2. What is the primary purpose of following waste segregation protocols on a worksite?

a) To reduce material quality

b) To ensure proper recycling and disposal based on material type

c) To increase the overall waste produced

d) To allow workers to dump waste anywhere

3. Which of the following is a recommended strategy for minimizing plastic waste on a worksite?

a) Use more disposable plastic materials

b) Use plastic materials only for non-recyclable purposes

c) Minimize the use of non-disposable plastic materials and recycle where possible

d) Ignore plastic waste management

4.To minimize material waste on a worksite, workers should focus on _____ materials and using them efficiently.

5. Proper waste handling involves segregating materials based on their type, such as recyclable, non-recyclable, and _____ materials.

6.The use of non-disposable plastic materials should be _____ to reduce environmental impact.

9. Unit 8 NOS 7: Employability Skills (DGT/VSQ/N0102)

9.1. Key Learning Outcomes

- Introduction to Employability Skills Constitutional values - Citizenship
- Becoming a Professional in the 21st Century Basic English Skills
- Career Development & Goal Setting Communication Skills
- Diversity & Inclusion
- Financial and Legal Literacy Essential Digital Skills
- Entrepreneurship Customer Service
- Getting ready for Apprenticeship & Jobs

9.2.Unit 7.1: Preparing for Employment & Self Employment

9.2.1. Unit Objectives

At the end of this unit, students will be able to

1. **Develop Job Readiness Skills**:
2. **Create Effective Job Search Strategies:**.
3. **Prepare for job interviews and networking opportunities.**
4. **Identify potential self-employment ideas and business opportunities.**

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5. **Understand Employment Rights and Responsibilities:**
6. **Enhance Personal Branding:**
7. **Develop Financial and Organizational Skills:**

9.2.2. Resources

- Whiteboard, erasable marker, board cleaner, projection screen, laptop, speaker, notebook, pen, participant handbook, etc
- Flip chart
- Participant Manual
- Projection screen and PowerPoint presentations.
- Activities (role plays)

9.2.3. Say

Tell the participants that when an interviewer asks you to say something about yourself, he/she is not asking you to present your life history.

• Introduction should be short and crisp, and should present you in a positive light. It should include the following points:

o Any work experience that you might have

o A brief summary of your educational qualifications

o Your strengths and achievements

o Any special projects that you might have been part of

• The following topics should be avoided during an introduction:

o Detailed description of your family (unless you are specifically asked to do so)

o Too much information about your weaknesses

o Information that is not true

9.2.4. Do

- Congratulate each participant for making their first attempt towards creating an effective resume.
- As a follow up activity, you can suggest them to prepare their own resume and show it to you the next day.

9.2.5. Role Play

Conduct a role play for the situation given.

Role Play –

• The interviewer will start by asking the interviewee a few generic questions such as:

o What is your name?

o Tell me something about yourself?

o Can you tell me something about your family?

• Then, at the end of the interview, ask the interviewee:

o There are over 200 people who have applied for this job, some with excellent work experience. Why should I hire you?

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9.2.6. Notes for Facilitation

Summarize the important points and terms explained in the session.

- Ask participants if they have any doubts. Encourage them to ask questions.
- Answer questions, as needed, providing concrete and brief answers.
- Tell participants to complete the questions at the end of the unit.
- Ensure that every participant answers all the questions

9.2.7. Summary

Job Readiness:

Develop skills for seeking and securing employment or starting a business.

Job Search Tools:

Create a professional resume, cover letter, and online presence.

Prepare for job interviews and networking.

Self-Employment:

Identify and explore potential self-employment or business ideas.

Understand the basics of starting and managing a small business.

Workplace Rights

Learn about employment laws, rights, and responsibilities.

Personal Branding:

Build a strong personal brand for career or business growth.

Financial Planning:

Develop essential financial and organizational skills for employment or entrepreneurship.

9.2.8. Exercise

1.What is the first step in preparing for employment?

A) Writing a resignation letter

B) Creating a resume

C) Opening a business

D) Networking with friend

2.Which of the following is NOT typically required for self-employment?

A) A business plan

B) An employer to answer to

C) Financial management skills

D) Marketing and sales strategies

3.What should be included in a self-employment business plan?

A) The business idea and goals

B) A list of personal contacts

C) A resume

D) A job offer letter

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4.True or False: In self-employment, you are responsible for your own business operations, including financial management and legal compliance.

5.True or False: Having relevant qualifications and work experience is the only factor to consider when preparing for employment.

6.True or False: Personal branding is important for both self-employment and traditional employment opportunities.

9.3. Unit 7.2. Understanding Entrepreneurship

9.3.1. Unit Objectives

At the end of this unit, students will be able to

1. Discuss the concept of entrepreneurship
2. Discuss the importance of entrepreneurship
3. Discuss the characteristics of an entrepreneur
4. Describe the different types of enterprises
5. List the qualities of an effective leader
6. Discuss the benefits of effective leadership
7. List the traits of an effective team
8. Discuss the importance of listening effectively
9. Discuss how to listen effectively
10. Discuss the importance of speaking effectively
11. Discuss how to speak effectively
12. Discuss how to solve problems
13. List the important problem solving traits
14. Discuss ways to assess problem solving skills

9.3.2. Resources

- Whiteboard, erasable marker, board cleaner, projection screen, laptop, speaker, notebook, pen, participant handbook, etc
- Flip chart
- Participant Manual
- Projection screen and PowerPoint presentations.
- Activities (role plays)

9.3.3. Say

Let’s start this session with some interesting questions about Indian entrepreneurs

9.3.4. Do

Tell them that you will ask them few questions about a few entrepreneurs.

• Divide the class in to two groups.

• In turns ask the quiz questions to the groups.

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• If the answer is incorrect pass the question to the other group.

• Share the answer if the groups are not able to answer.

• Congratulate the participants who answered correctly

9.3.5. Team Activity

Divide the class into small teams (4-5 participants per team).

Each team needs to come up with a unique business idea. Encourage participants to think creatively, focusing on solving a real-world problem.

Teams should discuss and finalize their business idea

Business Plan Development

Teams will work together to develop a simple business plan for their idea. The plan should cover the following key points:

Business Idea: What is the product or service? How does it solve a problem?

Target Market: Who are the customers? What are their needs?

Unique Value Proposition: Why is the business idea different or better than others in the market?

Revenue Model: How will the business make money (e.g., sales, subscriptions, ads)?

Marketing Strategy: How will the business attract customers?

Launch Plan: How will they introduce the business to the mark

9.3.6. Notes for Facilitation

Summarize the important points and terms explained in the session.

- Ask participants if they have any doubts. Encourage them to ask questions.
- Answer questions, as needed, providing concrete and brief answers.
- Tell participants to complete the questions at the end of the unit.
- Ensure that every participant answers all the questions

9.3.7. Summary

Close the discussion by summarizing about the opportunities for entrepreneurs in India

9.3.8. Exercise

1. Which of the following is a good practice for writing a professional email?

A) Using a casual tone and slang

B) Including a clear subject line

C) Writing long paragraphs without breaks

D) Not using a greeting

2. Which research method is often used to assess market opportunities for a new business?

A) Historical analysis

B) Surveys and questionnaires

C) Personal opinions

D) Guesswork

3. Which of the following is a primary motivation for entrepreneurs?

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A) Seeking a stable salary

B) Solving problems and creating value

C) Avoiding risk

D) Working within a corporate structure

4.True or False: An entrepreneur's role in the economy is limited to running a business for profit.

5.True or False: The entrepreneurial mindset involves risk-taking, resilience, and the ability to adapt to challenges.

6. True or False: Entrepreneurship only applies to individuals who start their own businesses and does not include individuals who work within large corporations.