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Safety Skill Development Foundation

# Facilitator Guidebook

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**About this Guidebook**

This guidebook offers a structured, holistic approach to training and capacity-building in safety measures specific to working at height. It is designed to equip trainers and trainees with a blend of theoretical concepts and practical skills essential for assessing, managing, and mitigating risks related to working at height in various industries.

The content of this guide aligns with the National Occupational Standards (NOS) and the National Skills Qualification Framework (NSQF), ensuring that learners gain competence in safety protocols, risk management, and emergency preparedness specifically related to height-related tasks. It also adheres to global safety standards, including those set by OSHA, NFPA, and IEC, ensuring compliance with industry-leading safety practices.

Trainers using this material should have experience in working at height safety, industrial safety management, and fall protection system implementation. This guide ensures that trainees are equipped with the knowledge and skills to confidently navigate elevated work environments, identify hazards, and follow best practices for fall protection, rescue, and compliance.

**Key Learning Areas**

1. **Knowledge and Understanding**

- Recognize the risks associated with working at height.
- Understand the regulations and best practices for fall protection and safety measures.

2. **Performance Criteria**

- Safely conduct inspections of work at height equipment.
- Implement safety measures such as the proper use of PPE, fall arrest systems, and rescue plans.

3. **Professional Skills**

- Decision-making skills when handling hazardous situations.
- Documentation, reporting, and hazard identification to ensure continuous safety compliance.

**Essential Topics Covered**

This guidebook covers critical training areas to build awareness and improve safety practices for working at height:

1. Risk Assessment and Fall Hazard Identification
2. Selection and Use of Personal Protective Equipment (PPE)
3. Fall Protection Systems and Emergency Rescue Procedures
4. Safe Ascending and Descending Techniques
5. Inspection and Stability of Elevated Platforms
6. Ground-Level Safety Measures for Height-Related Work
7. Health Considerations and Medical Screening for Workers at Height
8. Compliance with National and International Safety Standards
9. Regulatory and Legal Framework for Working at Height

**Purpose and Impact**

**By mastering the principles outlined in this guide, trainers and professionals can:**

- Promote a safety-first culture in organizations, reducing risks associated with height-related tasks.
- Ensure compliance with workplace safety standards and regulations specific to elevated work environments.
- Minimize the occurrence of accidents and injuries by implementing effective safety measures and preventative strategies.

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- Encourage continuous learning and safety practice updates to stay aligned with evolving safety standards.

**Work At Hight Sign's**


Contents

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# 1. Module 1: Fall Prevention and Equipment Selection

## 1.1. Introduction

Working at height is one of the most hazardous activities in many industries. This module focuses on equipping learners with the knowledge and practical skills to prevent falls, identify risks, use proper personal protective equipment (PPE), and comply with regulations. By the end of this module, participants will understand the fundamentals of working safely at heights and be able to apply them in real-world scenarios.

### 1.1.1. Key Learning Outcomes

**1. Define Risks and Challenges While Working at Height**

- **Understand the potential hazards** that can arise when working at heights, such as falling, structural failure, and environmental factors (e.g., wind or weather).
- **Recognize the consequences of accidents** associated with falls, including serious injury or death, and the impact on workplace productivity and safety culture.

**2. Identify Safety Measures and Precautions**

- **Explain key safety measures** to prevent falls, including the use of guardrails, safety nets, and proper fall protection systems (harnesses, lanyards, and anchor points).
- **Demonstrate the importance of proper hazard assessments** and the need for control measures before engaging in tasks at height.
- **Understand the significance of following safe work practices**, such as not overloading platforms, maintaining a clean working area, and using stable ladders or scaffolding.

**3. Enumerate PPE and Fall Protection Systems**

- **Identify and describe various PPE** (Personal Protective Equipment) used when working at height, such as:
  - Full-body harnesses
  - Helmets with chin straps
  - Non-slip boots
  - Lanyards and shock absorbers
- **Recognize and explain different fall protection systems**, including:
  - Fall arrest systems
  - Work positioning systems
  - Restraint systems
  - Guardrails and safety nets

**4. Assess the Stability of Elevated Platforms**

- **Perform a safety inspection** of elevated platforms (such as scaffolds, ladders, and work platforms) to ensure they are safe for use, focusing on structural integrity, proper anchoring, and load capacity.
- **Identify unsafe conditions** such as slippery surfaces, unstable scaffolding, or improperly secured equipment that could lead to accidents.

**5. Understand Legal Provisions and Regulatory Requirements**

- **Recognize the importance of adhering to safety regulations** (such as OSHA standards or local health and safety laws) in fall prevention when working at height.
- **Familiarize with the necessary documentation**, including risk assessments, safety permits, and equipment inspections.

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- **Understand the legal obligations** of employers and workers regarding safety protocols, training, and incident reporting.

**6. Recognize Incompatible Health Conditions**

- **Identify health conditions** that may make working at height dangerous, such as vertigo, epilepsy, poor vision, or cardiovascular issues.
- **Understand the need for pre-placement and periodic medical screenings** to ensure workers are fit for tasks at height.

**7. Implement Medical Screening Procedures**

- **Understand the importance of medical evaluations** before and during employment for those working at height.
- **Use medical checklists and procedures** to assess workers' fitness levels and detect any health concerns that could compromise safety.

### 1.1.2. Unit Objectives

- Understand the risks and challenges involved in working at height.
- Identify appropriate fall prevention and protection equipment.
- Explain and implement safety precautions and best practices.
- Recognize regulatory provisions and medically incompatible conditions.
- Perform basic safety inspections and proper equipment use.
- Define the roles and responsibilities of personnel working at height.

### 1.1.3. Resources to be Used

- Full-body harnesses, lanyards, and helmets.
- Scaffolding models or platforms for demonstration.
- Case studies and real-life accident reports.
- National/international safety standards (e.g., OSHA, ISO, IS: 3521).
- Visual aids, videos, and PPE charts.
- Medical clearance sample forms and checklists.

### 1.1.4. Ask (Engage the Learners)

- Have you ever worked at height? What risks did you notice?
- Can you name common causes of falls in the workplace?
- What PPE have you used or seen being used for height safety?
- Why do you think medical screening is important for such work?

### 1.1.5. . Do (Practical Tasks)

- Demonstrate how to wear and adjust a full-body harness correctly.
- Perform a buddy check of PPE before a simulated climb.
- Identify unsafe conditions on a mock elevated platform.
- Conduct a mock medical screening evaluation using checklists.
- Compare two work platforms: one safe and one unsafe.

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## 1.1.6. Explain (Concept Clarification)

**A. Define Risks and Challenges While Working at Height**

- Falling from height due to loss of balance, misstep, or weak structures.
- Weather conditions like wind, rain, or heat affecting safety.
- Fatigue and distractions causing lapses in judgment.
- Lack of training or failure to use PPE properly.

**B. Identify Safety Measures and Precautions**

- Always use certified and inspected PPE.
- Ensure platforms are stable and not overloaded.
- Use guardrails, safety nets, and anchor points.
- Maintain a clean, dry working surface.
- Establish a fall rescue plan.

**C. Enumerate PPEs and Fall Protection Systems**

- **PPE includes**:
  - Full-body harness
  - Helmet with chin strap
  - Safety boots
  - Fall arrest lanyards
  - Shock absorbers
  - Anchor connectors
- **Fall protection systems**:
  - Fall arrest system
  - Work positioning system
  - Restraint system
  - Safety nets
  - Guardrails and scaffolds

**D. Judging Stability of Elevated Platforms**

- Confirm platform is level and on solid footing.
- Check load ratings and weight distribution.
- Ensure scaffolds are properly braced and tied.
- Inspect for any visible wear, rust, or damage.

**E. Provisions as per Regulations**

- Adhere to OSHA standards or local regulations (e.g., India's IS 3521).
- Conduct risk assessments and provide PPE training.
- Mandatory fall protection when working above certain heights (e.g., 6 feet).
- Maintain documentation of inspections, training, and incidents.

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**F. Recognize Incompatible Health Conditions**

- Vertigo or fear of heights
- Epilepsy or other seizure disorders
- Vision impairments
- Heart disease or high blood pressure
- Psychological or stress-related conditions

**G. Medical Screening Procedures**

- Pre-placement health evaluation including physical and vision checks.
- Periodic medical check-ups and documentation.
- Medical clearance required before assignment.
- Use of standard screening forms.

### 1.1.7. Tips (Best Practices)

- Inspect PPE before and after each use.
- Never bypass or alter safety equipment.
- Use the "3-point contact rule" when climbing ladders.
- Keep tools secured to prevent falling objects.
- Always have a trained rescue plan and emergency contact system.

### 1.1.8. Activity: Team Spot

- **Objective**: Divide the class into teams. Provide each team with photos or a real setup of a work-at-height scenario. Teams must identify and list:
- Unsafe practices
- Missing PPE
- Potential fall hazards
- Recommendations to make the setup safe
- **Debrief**: Teams present findings. Trainer reinforces key safety concepts using their responses.

### 1.1.9. Notes for Facilitation

- Encourage learners to share personal experiences to make content relatable.
- Use real equipment for demonstration.
- Use visual aids frequently.
- Keep sessions interactive and hands-on.
- Reinforce seriousness of height-related injuries with real examples.

### 1.1.10. Summary

- Working at height is high-risk and requires strict adherence to safety protocols.

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- Using proper PPE and conducting regular checks is non-negotiable.
- Stability of platforms and medical fitness are critical for safety.
- Everyone has a role—worker, supervisor, safety officer.
- Regulations exist to protect lives; compliance saves lives.

#### 1.1.11. Exercise

- **A. Written Exercise**
- MCQs on PPE types, risk assessment steps, and fall protection hierarchy.
- Fill in the blanks on regulations and equipment parts.
- **B. Practical Drill**
- Set up a mini scenario for learners to inspect and demonstrate proper use of equipment and hazard identification.

## 1.2. Roles and Responsibilities: Basics of Safety Requirements in Working at Height

### 1.2.1. Unit Objectives

- Clarify safety responsibilities of all stakeholders.
- Ensure accountability and teamwork in fall prevention.

### 1.2.2. Resources to be Used

- Sample job roles and responsibilities.
- Role cards for group simulation.
- Incident investigation templates.

### 1.2.3. Ask

- Who is accountable for PPE inspection?
- What should a supervisor check before work at height begins?

### 1.2.4. . Do

- Role-play exercise: Assign roles (worker, supervisor, safety officer) to groups. Simulate a pre-job safety briefing.

### 1.2.5. Explain

- **Worker Responsibilities**
- Wear PPE, follow procedures, and report hazards.
- **Supervisor Responsibilities**
- Ensure workers are trained, equipped, and medically fit.
- Approve work only after inspection.
- **Safety Officer Responsibilities**
- Conduct safety drills, audit systems, and maintain records.

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### 1.2.6. Tips

- Always document inspections and briefings.
- Rotate responsibilities to increase team ownership.
- Encourage open reporting of hazards.

### 1.2.7. Activity: Team Spot (Roles Focused)

- Each team gets a situation. They must map out who does what (worker, supervisor, safety officer), present the roles, and justify actions taken.

### 1.2.8. Notes for Facilitation

- Use real scenarios and stress importance of role clarity.
- Be clear on legal accountability and consequences.

### 1.2.9. Summary

- Role clarity prevents lapses.
- Shared responsibility leads to safer operations.
- Training and empowerment of each role are essential.

### 1.2.10. Exercise

- Match-the-role quiz.
- Case scenario: Assign accountability in a fall incident.

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# 2. Module 2: Fall Safety Procedures and Measures

## 2.1.1. Introduction

In this module, we will focus on the specific safety measures and procedures that ensure a safe work environment when working at height. This will cover precautions for ascending and descending, measures to protect persons below, ground-level safety, identifying causes of negligence, reporting hazards, and effective rescue measures. This module also highlights the importance of avoiding work under unsafe conditions.

## 2.1.2. Key Learning Outcomes

**1. Precautions on Ascending/Descending**

- **Understand the safety procedures** involved when ascending and descending while working at height.
  - Emphasize the **"three points of contact" rule** (two hands and one foot, or two feet and one hand) for maintaining stability.
  - Ensure workers **check equipment** (e.g., ladders, scaffolds) for stability and security before use.
  - **Use appropriate PPE** like harnesses, lanyards, helmets, and non-slip footwear when climbing or descending.
  - **Maintain careful movement**: Prevent sudden or jerky movements while climbing and ensure that the body is always positioned properly for balance.

**2. Measures to Protect Persons Below**

- **Identify safety systems and techniques** to safeguard workers and others on the ground from falling objects or materials.
  - **Install safety nets** or **catch platforms** below elevated work areas to catch any falling debris or workers.
  - **Set up exclusion zones** with barriers and warning signs to keep unauthorized personnel out of areas where there are fall risks.
  - **Ensure secure storage**: Properly store tools, materials, and equipment to avoid them being dislodged and falling.
  - **Wear head protection** (e.g., helmets) for workers below to protect against potential falling objects.
  - **Monitor surroundings** to ensure no workers are underneath elevated platforms while work is ongoing.

**3. Ground-Level Safety Measures**

- **Implement safety measures at ground level** to reduce risks for workers operating underneath or near elevated areas.
  - **Establish clear warning systems** (such as flashing lights or audible alarms) to alert ground-level workers to the presence of overhead hazards.
  - **Create safety barriers or fencing** around areas below elevated work zones to prevent unauthorized access and protect workers from falling objects.
  - **Conduct ground-level hazard assessments** to identify risks from equipment, scaffolds, or any other overhead activities.
  - **Ensure all personnel at ground level wear the proper PPE**, including hard hats, safety shoes, and reflective vests.

**4. Identify Causes and Negligence**

- **Recognize common causes of falls** and preventable mistakes that lead to accidents.
  - **Inadequate fall protection**: Not using or improperly using personal fall arrest systems, like harnesses or lanyards.
  - **Unsafe working conditions**: Relying on faulty or unstable scaffolds, ladders, or other elevated work platforms.

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- **Failure to inspect**: Skipping necessary safety checks and maintenance of equipment and work sites.
- **Human error**: Disregarding safety procedures, such as rushing or ignoring PPE requirements.
- **Environmental factors**: Weather conditions such as high winds or rain that make working at height dangerous.

**5. Reporting Hazards**

- **Implement a system for reporting hazards** to proactively address unsafe conditions.
  - Encourage workers to report any **near-misses** or **unsafe conditions** immediately, without fear of reprimand.
  - **Establish a clear hazard reporting procedure**: This should include who to report to, how to document the hazard, and the steps for addressing it.
  - **Document all reports** and take prompt corrective action to mitigate risks. Ensure **regular hazard assessments** are done, especially before and during work at height.
  - **Use hazard reporting systems** such as digital tools or safety apps for quick and efficient communication of risks.

**6. Rescue Measures**

- **Understand and implement rescue procedures** for a worker who falls or is injured while working at height.
  - **Establish a fall rescue plan**: Ensure all workers are trained on how to safely execute a fall rescue and the steps to take if a fall occurs.
  - **Use proper rescue equipment**: This may include rescue ropes, pulleys, stretchers, and other devices that can assist in retrieving an injured worker.
  - **Coordinate with emergency services**: Ensure a direct communication line with medical or fire response teams and know the fastest route for them to reach the injured worker.
  - **First aid knowledge**: Train workers in basic first aid to stabilize the injured person until professional medical help arrives.

**7. Avoid Work Under Unsafe Conditions**

- **Identify and suspend work immediately** if conditions are unsafe for working at height.
  - **Suspension of work due to environmental factors**: If adverse weather conditions (e.g., storms, high winds, or low visibility) are present, workers should cease all activities at height.
  - **Inspect work platforms regularly** to ensure there are no structural issues, loose parts, or damage that could jeopardize safety.
  - **Eliminate or mitigate hazards** before proceeding with work. If a work platform, ladder, or scaffold is found to be unsafe, do not proceed with the task until repairs are made.
  - **Follow all safety regulations**: Ensure compliance with industry standards, including OSHA regulations, and provide workers with proper training to recognize unsafe conditions.

## 2.1.3. Unit Objectives

- Understand the procedures for safely ascending and descending while working at height.
- Implement measures to protect individuals working below elevated platforms.
- Identify and take corrective action for common causes of negligence.
- Develop a process for reporting safety hazards and near-miss incidents.
- Understand and execute proper rescue measures in case of a fall.
- Recognize unsafe work conditions and take proactive steps to avoid them.

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### 2.1.4. Resources to be Used

- Fall arrest systems (harnesses, lanyards, helmets).
- Scaffolding or elevated work platforms for practical demonstration.
- Safety videos or case studies of fall incidents.
- Fall safety checklists and inspection forms.
- Rescue equipment (e.g., stretcher, first aid kit, rope rescue gear).
- Safety signage and barricades.

### 2.1.5. Ask (Engage the Learners)

- Have you ever had to ascend or descend at height? What safety measures did you use?
- How would you protect workers below an elevated platform?
- What do you think are the most common causes of falls at height? How can we prevent them?
- What would you do in case of a fall? How would you react?

### 2.1.6. Do (Practical Tasks)

- Demonstrate proper techniques for ascending and descending ladders or scaffolds.
- Conduct a mock hazard inspection at an elevated work site to identify risks.
- Perform a fall rescue simulation, including how to safely reach the fallen worker and stabilize the injured person.
- Set up a safe perimeter and ground-level safety measures beneath an elevated platform.
- **Explain (Concept Clarification)**

**A. Precautions on Ascending/Descending**

- **Ensure stability**: Check that ladders, scaffolding, or any equipment used for ascension is stable and secure.
- **Three points of contact**: Maintain three points of contact (e.g., two hands and one foot) while ascending or descending.
- **Use appropriate PPE**: Always wear fall protection gear (e.g., harness with lanyard, helmet) during ascension or descent.
- **Climb slowly and carefully**: Avoid rushing and maintain a slow, deliberate pace to prevent accidents.

**B. Measures to Protect Persons Below**

- **Use of safety nets**: Install safety nets below elevated platforms to catch any falling objects or personnel.
- **Warning signs and barriers**: Place appropriate barriers and warning signs around the work area to keep people out.
- **PPE for workers below**: Workers beneath elevated areas should wear helmets and other protective gear to prevent injury from falling objects.
- **Falling object prevention**: Ensure tools and materials are securely attached or contained to prevent falling items.

**C. Ground-Level Safety Measures**

- **Barricades and exclusion zones**: Mark off and restrict access to areas directly under elevated work.
- **Safety barriers**: Use physical barriers to separate the ground-level workers from the hazard area.
- **Alert ground workers**: Ensure ground-level personnel are aware of ongoing work at height and the potential hazards.

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**D. Identify Causes and Negligence**

- **Failure to use PPE**: Workers failing to wear proper fall protection gear.
- **Improper inspection**: Skipping equipment checks or assuming that equipment is safe without verifying.
- **Lack of training**: Workers not being properly trained on fall prevention systems and procedures.
- **Inadequate supervision**: Supervisors not enforcing safety rules or missing signs of risky behaviours.

**E. Reporting Hazards**

- **Incident reporting**: Encourage employees to report near-misses, hazards, or unsafe conditions immediately.
- **Documentation**: Ensure all reported hazards are documented and acted upon promptly.
- **Safety reporting culture**: Foster an environment where workers feel comfortable reporting safety issues without fear of reprisal.

**F. Rescue Measures**

- **Immediate response**: Ensure that all workers know how to initiate the fall rescue procedure.
- **Use of rescue gear**: Train workers to use specialized rescue equipment (e.g., rope systems, pulleys, stretcher).
- **Coordination with emergency services**: Have a plan in place to contact emergency responders in case of severe injuries.
- **First aid**: Provide workers with basic first aid training to stabilize an injured worker before professional help arrives.

**G. Avoid Work Under Unsafe Conditions**

- **Suspension of work**: Stop work immediately if unsafe conditions are identified, such as extreme weather, unstable platforms, or faulty equipment.
- **Reassessment of risks**: Continually assess risks and adjust work plans as needed.
- **Ensure compliance with safety regulations**: Always work within the established safety guidelines and regulatory frameworks.

## 2.1.7. Tips (Best Practices)

- Always double-check equipment before starting work at height.
- Ensure workers are aware of and follow the "three points of contact" rule when climbing.
- Regularly inspect scaffolds and ladders for stability.
- Use spotters when workers are working on elevated platforms to observe and correct unsafe practices.
- Conduct falls rescue drills periodically to ensure everyone knows their role in case of an emergency.

## 2.1.8. Activity: Team Spot

- Divide learners into teams and provide them with photos or a real-life worksite setup (scaffold, elevated work platform).
- Teams must identify the hazards (e.g., unprotected edges, missing fall protection, unsecure tools) and suggest safety measures to eliminate them.
- After 10 minutes, groups present their findings, and the facilitator reinforces key fall safety principles.

## 2.1.9. Notes for Facilitation

- Be sure to stress the importance of situational awareness when working at height.
- Encourage open discussion and sharing of real-world experiences.

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- Use video or visual examples of accidents to reinforce the need for safety.
- Make sure to focus on the importance of teamwork and communication during rescue operations.

### 2.1.10. Summary

- Proper safety measures and precautions can significantly reduce the risk of falls and injuries.
- Ascending and descending safely, protecting persons below, and ensuring ground-level safety are critical components of fall prevention.
- Identifying causes of negligence and creating a culture of hazard reporting can prevent incidents before they occur.
- Rescue measures must be practiced regularly, and workers should never perform tasks under unsafe conditions.

### 2.1.11. Exercise

- **Written Exercise**: Multiple-choice questions about fall protection systems, reporting hazards, and safety measures.
- **Practical Exercise**: In teams, conduct a fall safety inspection of a mock elevated worksite. Identify and correct unsafe practices.

## 2.2. Roles and Responsibilities of Basics of Safety Requirements in Working at Height

### 2.2.1. Unit Objectives

- Understand the roles and responsibilities of workers, supervisors, and safety officers in ensuring fall safety.

### 2.2.2. Resources to be Used

- Job roles and responsibilities templates.
- Case studies of safety incidents.

### 2.2.3. Ask

- Who is responsible for ensuring safety when working at height?
- What is the supervisor's role in fall protection?

### 2.2.4. Do

- Role-playing exercise: Assign roles (worker, supervisor, safety officer) in a fall safety scenario and have each person explain their responsibilities.

### 2.2.5. Explain

- **Worker Responsibilities**: Ensure the use of PPE, report hazards, follow safety procedures.
- **Supervisor Responsibilities**: Inspect work conditions, verify proper use of PPE, ensure workers' competency and health.
- **Safety Officer Responsibilities**: Conduct safety audits, ensure regulatory compliance, facilitate training and emergency drills.

### 2.2.6. Tips

- Regularly review roles and responsibilities to ensure clarity.
- Provide refresher training for workers and supervisors on emergency response protocols.

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### 2.2.7. Activity: Team Spot (Roles Focus)

- Team-based activity where learners review a scenario and assign responsibilities to the appropriate role (worker, supervisor, safety officer).

### 2.2.8. Notes for Facilitation

- Highlight the importance of clear communication among all roles involved.
- Emphasize legal implications of neglecting responsibilities.

### 2.2.9. Summary

- Defined roles and responsibilities lead to a safer work environment.
- Effective communication and oversight can prevent accidents and improve overall safety performance.

### 2.2.10. Exercise

- Match the role with the appropriate responsibility in a fall safety scenario.