**Foremen’s**

**Fall Prevention Training:**

Instructors

Manual

Washington University School of Medicine & The Carpenters' Joint Apprenticeship Program

Funded by: Center for Construction Research & Training

& the National Institute of Occupational Safety & Health**Outline**

1. Introduction
2. Fall prevention training (OSHA Regulations/Residential Guidelines)
3. Fall prevention plans
4. St. Louis Audit of Fall Risks
5. Work crews’ fall prevention knowledge and skills
   1. Assigning work within the workers’ skills and abilities
   2. Ensuring crew follows fall prevention guidelines and company’s plan
      1. How do we train and mentor to be sure learning has occurred and behaviors change?
6. Formal crew training – tool box talks
7. Informal day-to-day mentorship
8. Importance of reinforcement and feedback
9. Juggling safety and productivity demands
10. The role of journeymen in fall prevention
11. Developing your individual plan for behavior change

**Guiding Principles**

1. Rely on residential experience and expertise of the participants (most instructors have none)
2. Instructor as more of a facilitator rather than a teacher
3. Follow adult learning principles
4. Use examples that are meaningful and relevant to the context
5. Use role plays to practice behaviors common in inexperienced apprentices
6. Encourage problem solving among class
7. Use small groups to identify solutions for issues raised that have no clear solution
8. Use props in the classroom (or take into shop if at CJAP) in order to keep contextually relevant
9. Let learners direct the learning

**Other Ideas that we will integrate into the appropriate area on outline above**

1. Let foremen know what a new apprentice has learned in school, so they can identify the vast amount of information that they must impart at the worksite
2. Teach a novel task in different ways to show foremen that we learn best when instructions chunked, we have role models to watch, we problem solve with a buddy, we have visual props
3. Using toolbox talks for training in skills that apprentices must know and there’s no time to teach
4. Use all opportunities in a work day to facilitate learning and reinforce fall safety
5. Use OSHA online questions and answers to show that solutions are not “cut and dry”
6. Use cases brought up in class for role plays/problem solving, but have “canned” problems ready

**LESSON PLAN 1: Introduction**

Objectives of the Session:

1. Identify classmates’ background and learning expectations for the training session.
2. Brainstorm characteristics of foremen that are good safety mentors and trainers.
3. Identify their primary concerns regarding fall prevention at their jobsite.
4. Understand the overall class objectives, schedule, and design of the learning experiences.

Supplies: wipe off board or large paper, markers, stick on name tags or folded table plate

Sequence of Training:

The instructors introduce themselves by modeling what they want the participants to share. In order to maintain confidentiality, instructors will not share last name or name of contractors they work/worked for and they will not ask foremen to share this information; however they may if they choose too. Information we will ask participants to share is: It may be helpful to have instructor write these prompts on the board.

* 1. Years in the carpenters’ union
  2. Years in residential construction
  3. Years as a foremen
  4. Number of carpenters in crew
  5. Usual number of apprentices and journeymen in crew
  6. Construction phases their crew normally performs (frame, foundation, siding)

1. Participants share above information and write their first name on name tag or plate.
2. The instructor notes that given the participants experience level, they have probably worked for a lot of foremen and riding bosses/superintendents over the years. Ask them to tell the group about a supervisor that was excellent; he could juggle all of the responsibilities, keep the build on time, keep everyone safe, and was pleasant to be around. The instructor keys in on the characteristics that participants describe about this exceptionally good supervisor and writes them on the board. The instructor asks what this person did that made him a good safety mentor or trainer and writes this on the board.
3. Next, if there is time, ask the participants about their worse supervisor and discuss what this person did that made him so bad. Ask participants to share some safety “nightmares” about this supervisor.
4. The instructor asks the participants to share their primary concerns regarding work at heights and their ability to prevent their crewmembers from falling. (If this question does not promote participants to give examples of our priority areas possibly ask if there are any situations that make it difficult to implement fall protection procedures. Not sure if the current questions will promote conversation in that direction)
5. The instructor writes these concerns for all to read on the board, rewording the concerns and asking for clarification as needed. If participants do not bring up all of our priority areas (truss setting and layout, ladders, openings that cannot be addressed with conventional fall protection, and working at edges), the instructor asks if any of the foremen have concerns about these types of conditions. The instructor leaves the list on the board. We plan to have some posters of these priority areas in the room to refer to throughout the training. The instructor can use these as participants describe concerns.

The instructor wraps up by discussing the plan for the session. States that the two overall objectives are to improve the fall prevention safety of the participants’ worksites, and to improve the participants’ abilities to instill safety behaviors in their crewmembers through training and communication. Share that the participants will learn from each other, as each one of them does something exceptionally well that the others can learn from. State that participants’ will practice improving and mentoring fall safety in the class, that slides will be rarely used. Stress that in order to learn new behaviors, it is necessary to practice and to get feedback, so this is what we plan to do during the class. Explain break and lunch schedule, along with orientation to the facilities.

**LESSON PLAN 2: Fall Prevention Training**

Objectives for Session:

* 1. Identify OSHA’s 3 commonly accepted methods of fall protection, and the regulations governing each.
  2. Describe residential situations where conventional fall protection is infeasible.
  3. Understand the purpose of OSHA’s Residential Guidelines.
  4. Describe the use and requirements of controlled access zones at residential sites.
  5. Explain alternatives to conventional fall protection when working at leading edges, near floor/wall openings, and setting trusses.
  6. Brainstorm methods to protect their workers from falling during specific work situations commonly encountered at their job sites.

Supplies: Board or large pad of paper, markers, large pictures. Sequence of Training

Ask the participants if they are familiar with the 3 commonly accepted methods of fall protection (guardrails, safety nets, and PFAS) according to OSHA standards

If they are familiar, ask them to name the three methods. Then move to one of the larger pictures and ask them to identify which method of fall protection would be appropriate to utilize in this situation and why.

If they identify some of the situations that are infeasible to use fall protection then go with the conversation.

Make sure to write down the situations that they express for they will be used later in the lesson when participants are broken into small groups.

After they have worked through the first photo move to another photo and follow the same procedure.

If they are not familiar then briefly go over the three methods and ask from their experiences when they use these methods.

Guardrails

Safety nets

* + PFAS

If challenges to using fall protection procedures were not brought up in the first exercise then ask the participants in these situations (use the pictures again) when is difficult or infeasible to use these methods suggested by OSHA. Instructor will write these on the board to use when participant break into small groups. Continue by tossing out the question, “What happens when it is not possible, practical, or feasible to use one of the commonly accepted methods?”The instructor should guide the content of this discussion using the pictures.

Hand out a copy of OSHA’s Guidelines for Residential Construction, explain what it is, and discuss this with the foremen. Instructor should stress the fact that OSHA realizes how difficult it is to stay safe on job sites, and still get the work done in a timely manner. Present the guidelines as proof that OSHA recognizes their tough position.

Instructor should discuss the importance of using controlled access zones (CAZ). They should discuss when it is appropriate to use CAZ, and what the requirements are of CAZs.

Instructor will break the participants into groups of 3-4 and have them decide who will take notes. Instructor will then assign each group a situation that poses a challenge to using conventional methods (use ones expressed earlier). Instructor will ask groups to come up with the alternatives they use when confronted with these situations on their job sites. Remember to have them consider not only safety alternatives, but also economic conditions, materials, and labor restrictions. Give participations 5-7 minutes in their groups or until groups look finished.

After getting back into a large group, ask for feedback from each group, and write these methods on the board or on a chart. Make sure to highlight alternatives that work toward protecting their workers at heights and positively reinforce them for making that a priority.

**LESSON PLAN 3: Fall Protection Plans**

Objectives of the session:

1. Demonstrate an understanding of the OSHA standards concerning a company’s fall protection

plan.

1. Understand the complexity of developing a fall protection plan from the company’s point

of view.

1. Identify their role in implementing the fall protection plan.

Supplies: fall protection plans, worksheets, carpenter pencils

Sequence of Training:

1. Instructor will encourage an informal atmosphere by asking how many of the foremen have heard of Fall Protection Plans, and then how many have seen and adhere to their company’s specific plans. Instructor will ask if anyone has brought their company’s fall protection plan. This will give the instructor a chance to look over the plan briefly to identify key discussion points. If no one has brought company plan, the instructor will have a plan which s/he is familiar with, and will then read key points to prompt discussion.

2. Instructor tells the class that their knowledge will be tested to see if they know the OSHA standards concerning the development and implementation of their companies fall protection plan. The instructor then hands out the worksheet and instructs the participants that they will have 5 minutes to fill out the sheet as best they can with their groups. The team that fills in the most blanks correctly will get pencils.

3. Instructor will collect one sheet from each group and tally up the right answers. They will then return the sheets and go over the answers with the class as a whole. The winning group will be announced after the answers have been shared.

4. Instructor will facilitate a conversation asking the questions: What is typically covered in their fall protection plans? Do they feel as if these are useful in keeping the workers safe or more to cover OSHA and the company’s backs? Are there practical challenges in adopting the plans, as well as legal ramifications? How could the plans be improved?

5. Instructor will facilitate a discussion including the following key points:

1. How do the foremen feel about their designation as the competent person on their jobsites?
2. Do they feel they have the authority they need to actually act as a competent person?
3. Do they view this responsibility to implement the plan as “just part of the job”?
4. Do their riding bosses and companies provide the support they need to do their jobs effectively?
5. Are there any suggestions they could offer to their companies which would make this part of their jobs easier?

**Fall Prevention Plans: OSHA Standards Worksheet: KEY**

**Word Bank (words may be used more than once)**

Qualified Person Competent Person Name Alternative Implement

Jobsite Infeasible C.A.Z.’s Conventional

**Fill in the Blanks**

1926.502(k) The fall protection plan option is available only to employees engaged in residential construction work who can demonstrate that it is infeasible or it creates a greater hazard to use conventional fall protection equipment.

1926.502(k)(1) The plan shall be prepared by a qualified person and developed specifically for the site where the residential work is being performed. The plan must be maintained up to date.

1926.502(k)(2) Any changes shall be approved by a qualified person.

1926.502(k)(3) A copy of the plan with all of the approved changes shall be maintained on the jobsite.

1926.502(k)(4) Implementation of the plan shall be under the supervision of a competent person.

1926.502(k)(5) The plan shall document the reasons why the use of conventional fall protection systems are infeasible or why their use would create a greater hazard.

1926.502(k)(6) The plan shall include a written discussion of other measures that will be taken to reduce or eliminate the fall hazard for workers who cannot be provided with protection from the conventional fall protection systems. For example, the employer shall discuss the extent to which scaffolds, ladders, or vehicle mounted work platforms can be used to provide a safer working surface and thereby reduce the hazard of falling.

1926.502(k)(7) The plan shall identify each location where conventional fall protection methods cannot be used. These locations shall then be classified as C.A.Z.’s and the employer must comply with the criteria outlined for them. (see Objective 2(C) above)

1926.502(k)(8) Where no other alternative measure has been implemented, the employer shall implement a safety monitoring system.

1926.502(k)(9) The plan must include the name or other way to identify each employee who is designated to work in the C.A.Z.’s. No other employees may enter C.A.Z.’s.

1926.502(k)(10) If a fall or some other related serious incident occurs, the employer shall investigate the circumstances to determine if the plan needs to be changed, and shall implement those changes to prevent similar types of falls or incidents.

**LESSON PLAN 4: St. Louis Audit of Fall Risks (SAFR)**

Objectives of the Session:

1. Understand the purpose of the SAFR and the role that jobsite assessment can play in improving fall safety.
2. Recognize commonalities between the audit and OSHA’s Construction Standards and Residential Guidelines.
3. Explore differences between their employer’s fall protection plan and items on the SAFR.
4. Accurately score items on the SAFR for walking surfaces, truss setting, ladders, and personal fall arrest systems.

Supplies: SAFR audits, SAFR manual, worksite pictures, sample fall protection plan

Sequence of Training:

1. Begin by asking participants to think about what they have learned this morning and to grade how compliant they feel their worksite’s are with the fall prevention standards, guidelines, and their company’s fall protection plan.
   1. Instructor writes on board areas they perceive as strengths and weaknesses
2. Instructor shares baseline SAFR audit results from audits done at participants’ jobsites (if a small group combine with all participants to date or share results from the audits done by Denny and Jim as part of the prior fall prevention project).
   1. Instructor chooses best way to share this information, can make it a guessing game, show a graph, or just tell the group.
3. Discuss that there are some real areas of strengths and other areas for improvement. Ask participants to write down for themselves where they believe they need to improve.
4. Instructor passes out the SAFR audit and discusses that it is designed to assess the fall safety of residential sites. Describe the domains of the audit, then briefly review items under each domain, asking participants to identify items that correspond with OSHA’s construction standards, residential guidelines, and their company’s fall protection plan.
5. Instructor shows pictures or video clip of a worksite and asks participants to complete audit items they observe. Instructor directs to the domains of the audit that will be observable in the picture/video if not obvious.
6. Discuss the fact that being aware of these problems is the first step to fixing them. Stress that the role of the SAFR is only to identify problems. If we don’t look at things with a critical eye we miss the details.
   1. Possibly show a picture or tell a story that demonstrates that we sometimes have blinders on and miss what is not always obvious at first.
7. Share how the SAFR was able to identify problem areas and determine areas that changed after our last research project. Stress that we believe it can do the same for them. Suggest that the foremen:
   1. Score the SAFR or scales of it regularly. Possibly pull it out during every truss set and score the truss and ladder scale. Or do it before the day before a toolbox talk.

Discuss how they can use the SAFR at the worksites.

**LESSON PLAN 5: Work Crews Fall Prevention Knowledge and Skills**

Objectives for session:

1. Recall their first jobsite experiences in an attempt to understand the vast amount of information which must be learned by apprentice.
2. List the basic skills which are taught during the 1st, 2nd, and 3rd term apprentice classes.
3. Name various ways to ascertain what apprentices know and what they don’t know.
4. Identify multiple forms of instruction in order to accommodate different learning styles, teaching materials, and environments
5. Apply instruction techniques to job related situations they may encounter with their crews
6. Evaluate current methods used to teach and reinforce use of fall prevention among crew members and explore alternative methods that may be more effective.

Supplies: materials for activity, 2 videos

* 1. Instructor will facilitate a casual recollection among the foremen of their first days as a carpenter. Instructor should have some of his/her own stories in mind to get things started. Among the topics discussed might be:
     1. How old were you? How did you get into the trade?
     2. What type of work were you doing on your first day?
     3. How were you treated by other carpenters, journeyman, and foreman?
     4. What pressures did you feel as a new apprentice?
        1. Peer pressure, push for productivity, feeling of inadequacies, concerns regarding layoffs, fear of falling, need to do well.
     5. Early in your career were you asked to do anything you were scared to do? Or that you knew was unsafe? Did you do it anyway? Why?
     6. Did any mentors that you learned the most from? Why?
     7. Did you have mentors that you did not learn from? Why?
     8. How did you best learn how to perform new tasks? What did your mentors do to teach you these tasks? Were their methods effective?

1. Instructor will ask foremen what they expect of apprentices at different levels.

(Depending on time, might use a variation of the Apprentice Expectations Survey).

* Instructor will present a quick list of the curriculum of the 5 Day Orientation class, stressing that the majority of the week is spent in the classroom:
  + Orientation to CJAP and to CD
  + Talks by Lead Instructor, Counselor, and Employment Counselor
  + OSHA 10 hour class
  + Work Keys Assessments
  + Tape measure exercises, math remediation
  + Tool safety demonstrations in shop
  + Minimum shop time
* Instructor will present a quick list of the curriculum of the 10 day Orientation class, stressing that the majority of the time is spent in the classroom.
  + Basic Print reading, Aerial Lift Qualification, PAT Certification
  + STI Scaffold User Training, Basic Rigging, Fall Protection Training (including residential)
  + Math remediation, construction layout methods
  + Specific safety issues
  + Minimum shop time

1. Instructor will lead a discussion of the different ways to ascertain what apprentices know and what they don’t know. Some comments may include handshake, confidence, appearance, vehicle, conditions of tools, use of terminology, etc. Instructor will ask if first impressions determine the type of relationship you have with apprentices. Instructor will remind them that in many cases it takes a full day’s work to get a clear understanding of the capabilities of an apprentice.
2. Instructor will lead an activity to depict the different components of teaching a new skill. Instructor will ask for a volunteer.

*Part 1*

* 1. Once student is at the front of the class instructor talks about information that is not relevant to the activity that is about to be performed.
  2. Instructor places materials in an unorganized pile on the table and positions themselves across from the student
  3. Instructor tells the student that they are going to show them how to do this and then they are going to have to demonstrate how to do the activity
  4. Instructor completes the activity without discussing what he is doing (possibly asking questions such as “do you see what I am doing?”, “Are you paying attention?”)
  5. After the instructor finishes, he quickly takes the activity apart and asks the student to complete the task
  6. The student then tries to complete the activity (if they make a mistake the instructor simply says “no”, “that’s not it”, “weren’t you paying attention” etc.)
  7. Instructor gives the student approximately one minute to complete the task

(Even if student does not finish, the task it is put away)

*Part 2*

* 1. Instructor takes out another similar activity
  2. This time they begin talking about what the key points are of the task that they are about to show the student and position the materials in the order that they will be used
  3. The instructor positions himself on the same side as the student so the student can clearly see the task being performed
  4. The instructor tells the student that they will have to demonstrate how to do the activity after they have been shown one time
  5. As the instructor completes the activity they are explaining each step aloud
  6. Once they are done they ask the student to repeat back to them the steps that they need to do in order to complete the task
  7. The student then tries to complete the activity and the instructor gives constructive tips on how to move forward to complete the task if the student gets stuck
  8. The instructor gives the student approximately one minute to complete the task

Instructor will then lead a discussion about the differences between the two activities.

1. Instructor will play videos depicting situations where workers are not following proper fall prevention guidelines. For Example:
   * 1. A ladder not set up properly and a worker is about to use it
        1. In this situation the worker and the foreman are both at the same level so they would be able to utilize a method of instruction that included demonstrating and vocalizing the proper way to use the ladder within fall prevention guidelines
     2. A worker is not using proper fall protection when working at heights
        1. In this situation the worker and the foreman are not on the same level so they could utilize a method of instruction that included verbally breaking down the proper steps that he would like his worker to follow in order to work within the fall prevention guidelines
   1. These examples will prompt students to discuss ideas on how they would best instruct workers on proper fall prevention techniques based on the different methods of instructions learned above
2. Participants will now take a few minutes to reflect on their own forms of instruction and jot down any ideas they have gained from this lesson on new techniques or teaching approaches they could use with their crew members.

**LESSON PLAN 6: Formal instruction on the worksite- Toolbox talks**

Objectives for the session:

1.    Understand the key features of effective toolbox talks, such as including contextually relevant examples that coincide with current work tasks and risks encountered.

2.     Indentify ways to encourage active crew member participation and problem solving during toolbox talks.

3.     Evaluate their tool box talk delivery and explore alternative methods that may be more effective.

4.    Demonstrate how to give an effective toolbox talk.

Supplies: Materials for role play

Sequence of training:

1. Instructor will begin by showing a video or role playing what a toolbox talk could look like concerning fall prevention procedures. A discussion will then be led by the instructor concerning if this was an effective way to deliver a toolbox talk and why?
   1. This discussion should address:
      1. Length: 10-15 minutes
      2. Toolbox talks used to review known material not teaching new skills
      3. Should be pertinent to daily activities, including: weather conditions, tasks, productivity requirements, changes in company policies, equipment being used, etc.
      4. The use of stories to increase understanding and interest
      5. The use of best practices to guide crew in the right direction for decision making
2. Instructor will discuss ways that participants can encourage active crew participation incorporating the following concepts:
   1. Asking open ended questions such as:
      1. “Has anyone had a similar accident or near-miss?”
      2. “What would you do differently to prevent the accident?”
      3. “Could this accident happen on our worksite?”
      4. “Are there other best practices we could use on our worksite?”
      5. “What is preventing us from using these best practices”
   2. Limit the amount one person talks
   3. Never make fun of anyone- especially for when someone asks a question
   4. Don’t fake it- if you do not know the answer, write down the question and ask someone about it
   5. Stick to the topic – if a comment gets too far off topic then tell that crew member you can discuss that with them individually or after the talk
3. Instructor will then have the participants take five minutes to reflect on how they currently give toolbox talks and how they will change the way they give toolbox talks based on this lesson. Instructor will then ask a few of the participants to share some of their ideas aloud.
4. Instructor will pass out a scenario with a picture to the foremen. Instructor will ask one of the foremen to read the scenario aloud. Then foreman will be asked to break down the task and identify different hazards they could potentially make into toolbox talks.
   1. Foreman will break up into small groups. Group members will be randomly assigned a role designated on a slip of paper.
   2. Roles will include:
      1. Foreman- who will be reading and facilitating the toolbox talk (sample toolbox talk will be given to this participant)
         1. Ask open ended questions (listed on paper)
         2. Keep group on topic
      2. Worker #1: will have a personal experience to share
      3. Worker #2: will share how one could prevent the accident
      4. Worker #3: will share similar situations that present themselves on their worksites
      5. Worker #4: will share a hazard/concern completely off topic

**LESSON PLAN 7:** **Informal day-to-day Mentorship**

Lesson Objectives:

1. Draw upon their own past experience to realize positive and negative ways to impact behaviors.
2. Recognize the importance of body language and context in mentoring interactions.
3. Determining what an apprentices’ mentorship needs are and the best method of mentorship for each apprentice.
4. Give examples of ways to phrase suggestions and corrections which are conducive to learning.

Supplies: board, markers, role play scenarios, large pictures

Sequence of Instruction:

1. Instructor will ask the class to look at the pictures posted and think back to when they were in those situations. What role did their mentor play in keeping them safe at heights, if any? What type of positive and negative instruction did they provide? Instructor will write these on the board under “Positives” and “Negatives”. Participants should discuss things such as mentors not saying anything at all, mentors yelling at them to be safe, mentors giving specific instructions, mentors discussing their technique after they performed the task, etc.

2. Instructor will present a quick role play depicting a foreman communicating with poor non-verbal communication versus a role play that depicts a foreman communicating to a crew member with proper non-verbal communication. Instructor will ask the class to point out the differences between the two role plays. Some points that should be addressed include: talk respectfully and calmly, be straight and genuine, look person in the eye, have a relaxed posture.

3. The importance of assessing the situation should also be discussed. For example, the environment, time, rating of risks, assessment of crew members skills and attitude, the foreman’s attitude, etc. How would the participants go about addressing the situation? Possible points to discuss could include not saying anything at all, saying something to abate the dangerous situation, explaining the risks and proper procedures, etc.

4. Instructor will break apprentices into small groups and distribute a piece of paper that has different scenarios written on them. With each scenario participants will come up with different ways to communicate with this particular apprentice.

a. Johnny is 23 years old and he is a second term apprentice. You are aware that he has just finished up his classes at the local apprentice school. You notice that he is setting up a ladder wrong. Using what we have just discussed what are some ways to approach this situation?

5. Instructor will ask participants if anyone would like to share some of their ideas and give examples of different ways to phrase instruction after assessing situations.

**LESSON PLAN 8:** Importance of feedback and reinforcement

Objectives of the Session:

1. Comprehend the importance of timely, positive feedback and formative reinforcement.
2. Recognize the contagious effect that the foreman’s mood can have on the crew and identify methods to keep their mood in check when interacting with crew members.
3. Examine their own methods used with their crews and the effect of these on crew behaviors.
4. Demonstrate ability to effectively provide positive and formative feedback.

Supplies: Worksite posters on wall, board and markers

Sequence of Training:

1. Start by the instructors’ role playing a work situation where the boss asks the apprentice to install guardrails at window openings that face the sides of the house where the floor is over 6’ from the ground outside, reminding him that only windows less than 39” from the subfloor must be guarded. He reminded the apprentice that the guardrail should be 42” high, and if the window opening is low a mid-rail at 21” must also be installed; also that the guardrail should be inside mounted and be able to withstand at least 200# of force. When the foreman returns he observes that the apprentice is working on the rear window openings, the side window openings are guarded correctly; however 6 large windows at the front of the house which is near ground level have guardrails in place, even though they are not needed since the ground outside is only 2’ from the floor. He throws his arms up in the air and asks the apprentice in a yelling voice why he wasted all of that lumber and time on the front windows, reminding him the company is trying to save money not waste it. He told him that he better not mess up again, he is getting tired of his stupidity.
2. Ask the participants to place themselves in the apprentice’s shoes and describe how they feel after this interaction. They should respond with things like stupid, angry, mad at his boss, belittled, and scared of being fired. Ask them if they think the apprentice really knows what he did wrong? Or what he should do in the future? Stress that it is very possible that the apprentice doesn’t even understand why what he did was wrong; therefore he has no idea what to do in the future (do we never guard the front windows or large windows?).
3. Ask the participants how they feel that the foreman feels after this interaction. Does he feel better, or worse? Ask the participants if they believe the error was the apprentice’s fault or if the foreman had anything to do with it? It may be partially both individuals’ fault; however there are many rules for installing guardrails, and we already learned that people can only keep so many pieces of information in their mind at one time. Also, we know that apprentices learn best by watching others and not just being told what to do.
4. Discuss what could be done to make the interaction more successful.
   1. Improved teaching of the skill; after reviewing the requirements for guardrails, apply this knowledge to the windows in the house, talking through which ones need rails and why, and what the rails should look like for each window.
   2. When giving feedback, tell the apprentice that you expected to see guardrails only on windows that needed them, but that he has installed guardrails to windows that don’t need them. Tell him that only window openings above ground that is 6’ or more from the home’s floor need to be protected, and since the front floor is only 2’ from the ground guardrails are not needed. Allow the apprentice to explain his perspective, then the foreman should go through steps to help the apprentice know what to do in the future (if the directions are complicated write them down and ask for clarification), if not clear about the task, do the parts of the task you are certain about and wait on those you are not sure of (apply rails to the back of the house and wait on the front, I would have been back in time for you to ask). End by saying this will help us to maintain safety while still meeting our productivity.
5. Put these steps of feedback into some rules or guidelines. Write these on board.
   1. You begin by clarifying what you expected to see
   2. Explain how the worker performed
   3. Point out the difference between your expectation and the worker’s performance
   4. Discuss steps to fix the problem
   5. If necessary, consequences may be identified
   6. End on an upbeat note, worker has shown he can learn quickly and do good work
6. General feedback guidelines. Write these on board.
   1. Feedback should be specific
   2. Feedback should be often
   3. Feedback should be given for both correct and incorrect behaviors
   4. Feedback should be genuine
   5. Keep emotions out of the feedback as much as possible
   6. Focus should be on behaviors, not on personality characteristics of the person
   7. The goal is to get the worker to perform correct work behaviors; the worker should feel capable he/she can do the work correctly, not like he/she is incompetent, stupid, or a failure
   8. The “big mac” approach to feedback, start with positive statement (You have been learning really quickly since joining our crew), next describe the behaviors that need changed and the plan to correct them, end with another positive statement (I’m confident that you will be able to build window guardrails).
7. Before giving feedback, ensure that the emotions you are feeling are due only to what the worker you are going to speak with did, and not with other circumstances in your life; such as a conversation with the super or riding boss, supplies not being delivered, fender bender you were involved in on the way to work, an argument with your wife, etc.
8. Ask the foremen to think for a bit about recent situations where they gave negative (formative) feedback to a worker(s). Have them read the feedback guidelines written on the board and make a list of the guidelines they follow well and those they did not follow very well. Ask them to write down what they could have done to improve their feedback using the principles on the board. Have them write down how they think the worker would have left the feedback situation feeling in this new way versus the way they felt after the actual feedback session.
9. Ask the foremen to share some of these examples, describing the situation and how they plan to handle it in the future. Ask the other participants to give the foreman feedback about how well his new response matches the guidelines and to present their perspective on the situation. If the foreman will role play the situation with the instructor or another foreman, encourage they role play instead of just reading their new response. Have observers practice give feedback to the role playing foreman using principles learned in class.
10. Either have foreman role play these scenarios to the whole group or in groups of 3. Participants observing should give feedback, as should those playing the apprentice role.
11. Next, discuss the type of atmosphere that the foreman “sets” at the worksite when he is feeling upbeat and in a good mood. Discuss how this mood affects the workers. The instructor can share examples from teaching (classroom story), running work, or home (family or other situation) that demonstrate this principle. Ask participants to share some of their own stories, encouraging focus on the worksite.
12. Now discuss the type of atmosphere the foreman “sets” at work when he is tired, mad, worried, not feeling well, etc. Discuss how this mood affects the workers. Can share what an apprentice told Vicki during a focus group, that his boss is so grouchy all of the time, barking orders out all day, and when the apprentice gets home he is exhausted and humiliated from the experience, but he has to try to not take it out on his wife and kids. The instructor can share personal examples. Have participants share their own stories.
13. End by discussing methods to help the foremen deal with their “moods” at the workplace. Start by asking foremen what they currently do. Share some ideas; such as listening to upbeat music on the way to work, taking some deep breaths, envisioning yourself in a relaxing place that you enjoy, etc. Stress that we are all human and have these ups and downs, but that when you are the foreman, your emotions can overflow into the workplace and affect your workers’ ability to work safely and productively, and their self confidence and mood.

**LESSON PLAN 9: Juggling Safety and Productivity Demands**

Objectives of the Session:

1. Express the stressors which they regularly feel at work and the effect these can have on fall safety.
2. Explore current methods of dealing with these stressors and analyze the effectiveness of these methods.
3. Brainstorm methods for juggling these demands and identify tools needed to be more effective.

Supplies: board, markers, video

Sequence of Training:

Instructor will begin by showing a video clip that depicts the struggles of balancing safety with productivity demands

1. Begin by asking participants what pressures they feel on a regular basis at work, concentrating on the pressures from the company to produce and to have an accident free jobsite.
   1. As the foremen talk, the instructor writes what the perceived stressors are on the board.
   2. Have these pressures increased since the recession?
   3. According to the Needs Assessment, 35% of foremen rate keeping work on schedule as the hardest part of their job. Do they agree?
2. Acting mainly as a facilitator, the instructor will encourage a discussion among the foremen about how they deal with these specific stressors.
3. Instructor will ask how effective these methods are. Do they need some new ideas?
4. Instructor will lead a brainstorming session to address various ways to address these demands.
   1. Categorize responses in order to ensure that they hit all areas, and to have some ideas preplanned.
      1. Such as things internal to themselves (their thoughts, ruminations about pressures, stress management techniques, using planners or other organization tools to monitor expenditures and time, etc)
      2. things they can do with their crew (combining work in the same physical area to avoid extra steps, organizing the work, avoiding rework, limited waste of products, giving the crew targeted timelines)
      3. the work environment (good housekeeping to avoid walking around messes or moving piles several times, bringing tools up to workspace with bucket/rope to avoid trips up/down ladder, etc)
      4. with their riding boss/management (focus on progress, limit excuses and focus on plans)
      5. with people/companies external to theirs (scheduling crane closely to avoid down time, ensuring vendors have supplies there well in advance, etc).
5. Wrap up the session with the remainder of the video clip that depicts the solution that they chose to balance safety and productivity.

**LESSON PLAN 10: The role of journeymen in fall prevention**

Objectives for session:

1. Explore the role of journeymen on the crew in ensuring fall safety and mentoring apprentices.
2. Determine fall prevention and mentoring strengths and limitations of journeymen on crew.
3. Discuss ways to improve fall prevention behaviors of journeymen.
4. Explore use of journeymen to improve fall safety and mentor and train apprentices.
5. Demonstrate ability to provide positive and formative feedback to give journeymen.

Supplies: 4 bios

Sequence of Training:

1. Read examples of different journeyman and ask the participants if they would use him to mentor an apprentice or not. If they answer yes or no ask them why.
   1. Well respected journeyman but likes to cut corners and sometimes walk the top plate when setting trusses.
2. This should lead into a discussion about how there are many considerations one must take into consideration to determine if a journeyman will be a good role model and mentor for an apprentice. Some of these examples may include: display proper fall prevention, able to communicate well with the apprentices, approachable, good role models, respected by coworkers, etc.
3. Instructor facilitates a conversation as to how the participants can determine the strengths and limitations of journeymen who are potential mentors for apprentices. This is primarily done through observation and discussion with the journeymen to see if they are ready and willing to mentor apprentices. It is important for the supervisor to continually check in with the journeyman and give them feedback about how they are doing. This feedback should not only be instructive but also encouraging. It is also important to address when journeymen are not following proper safety procedures because apprentices are following their lead. It is up to the foreman to decide how they can best utilize their journeyman and recognize their strengths and weaknesses.
4. Instructor will use 2 of the bios that were read earlier to demonstrate how to improve fall prevention in journeyman. Instructor should recognize that it may be difficult to confront other journeyman about fall prevention because some may be older and more experienced than they are.
   1. For the guy who is well respected but likes to cut corners while setting trusses-one must first identify the goals for that journeyman. He has the potential to be a strong mentor for apprentices, but he needs to improve his safety behaviors while setting trusses. One should then address improving his safety behaviors and look at the different ways one could do this. One could simply remind him of the fall protection plan in print or one could have a discussion about how he does a really great job in all of these other areas and is looked up to by many of the apprentices. Ask him if he could try to be more aware of not walking on the top plates, but following proper procedure when setting trusses.
   2. [need to make up another one of these examples]
5. Instructor will then break participants into small groups of 2 or 3 and have them work through the other 2 bios read aloud earlier. After five minutes the instructor will ask some of the groups to share some of their thoughts and ideas about how to approach journeyman about possibly being a mentor and provide them with appropriate feedback.

**LESSON PLAN 11: Developing your individual plan for behavior change**

Objectives of the Session:

1. Determine their individual plan for assessing and improving the fall safety of their worksites.
2. Develop their plan for future toolbox talk training sessions.
3. Set realistic plan for crewmember mentoring.
4. Develop action plans for maintaining productivity without sacrificing safety.
5. Determine method to track goal achievement.

Supplies: Planning worksheet

Sequence of Training:

1. Begin by asking participants about what normally happens after they attend a class, lecture, meeting, sermon, etc. You may have learned a lot in the class you had to take at the DMV in order to get out of your speeding ticket, the preacher may have addressed a behavior that you need to work on in your life, or the speaker at the foremen’s annual meeting may have tried to instill a safety attitude in you; however you did the same thing after you left all of these sessions. NOTHING! You may have more knowledge, have learned some new behaviors, or have learned about the attitude that your employer wants you to have; but if you do not make a plan to use this new knowledge, to change your behaviors, or to modify your attitudes NOTHING will change.
2. Changing our habits is one of the hardest things to do…we tend to go into auto-pilot and replay the things that we are used to doing over and over, even if we know a better way and have the skills to improve. That is why the final step of this training is to develop a plan for using the information you have learned in this training.
3. We have covered a lot of areas in this training so now it is time to develop an action plan to help you put the knowledge and skills you learned into practice at the worksite. We have come up with an action plan form to help with this (hand out to participants). On the left are the areas that we covered in training, the next column is for you to list your goal(s) for that area, and the last column is how you will track goal achievement.
4. Let’s start with the first area, maintaining the fall safety of your worksite. We have discusses several ways to do this. One is to follow the fall prevention plan; the other is to do regular worksite audits with the SAFR. Of course the toolbox training, apprentice training, and mentorship will also improve the fall safety of the worksite. In the action plan column, think about what you plan to do in order to improve performance in this area. Make the action plan specific and measureable in terms of counts, frequency, date, etc. So one action plan item would be to use the SAFR to audit the worksite every Tuesday morning and to use the crew to abate any problems identified. Write in your plan for this area. Next let’s identify how you will know that you have achieved that plan, which could be 4 SAFR audits are performed each month. Think about that and write how achievement will be measured. We will also be measuring this a few times for the grant.
5. Next let’s consider the toolbox talks that you deliver. How can you improve these? Should you make them specific to the job task at hand? Have the crew identify risks and problem-solve methods to minimize exposure? Should crew be more actively involved in the talks? Let’s write an action plan for this area. We also need to look at how achievement will be measured for this item. Possibly you could ask your crew for feedback.
6. Moving on to teaching and mentoring apprentices next. Possible action plans could be to ask apprentices about their experience and comfort before assigning new tasks, to break down the task you are teaching into manageable chunks, to use more demonstrations to teach, to watch apprentices closely as they perform new tasks and give them feedback during the task if anything unsafe is observed, to ensure that other crewmembers are performing tasks safely so apprentice learns proper behaviors through observation, etc. Achievement could be measured by apprentice performs task correctly and safely, SAFR shows other crewmembers perform task correctly and safely, etc.
7. Next develop action plans for feedback; such give specific positive feedback to the crew or a crewmember at least once each day, before giving negative feedback do a quick mood check to be sure you are not just mad and taking it out on the apprentice, be sure feedback specifically describes the behaviors that you expect, avoid attacking the apprentice’s personality characteristics when giving feedback, etc. The achievement could be just mentally tracking this, but they could actually ask the apprentice for feedback. Of course we will be measuring this a few times for the grant.
8. Lastly, develop action plans for creating a positive environment for safety and productivity. This could be listening to your favorite feel good song the last 5 minutes of your commute to work, smiling more at work, shield workers from information that they don’t need to know to do their jobs (avoid complaining to them about pressure you are getting from the riding boss, supply problems, etc.), use stress management strategies when dealing with situations (take a few deep breaths, think of a relaxing spot, etc), avoid personal communications that may be stressful during the course of work (days you have argued with wife, talking to collection agency, etc). Achievement can be mentally measured or you can actually log each time the action plan is followed or not.
9. Possibly each participant could share one of their action plans if time allows. The instructor should provide ample positive feedback and offer helpful comments to those who share.
10. Wrap up by stating what the next step is for them and for the grant. Remind them that a member of the research team will be visiting their worksite several times over the next several weeks, doing the SAFR, interviewing crewmembers, and talking with the foreman. Stress that it will be up to them to follow through with this action plan. Possibly they could buddy up with another foreman and talk about how things are going every so often, or they can always call one of the instructors or the researcher.
11. Thank them for their participation. Give them a clipboard, copies of the SAFR audit, some pencils for crewmembers, our contact information, and the proof of attendance document. Wish them well.

**PERSONAL GOALS**

|  |  |  |
| --- | --- | --- |
| **Area** | **Action Plan** | **Achievement** |
| Maintain the fall safety of my worksites at all times. |  |  |
| Lead toolbox talks that will decrease crewmember fall risks. |  |  |
| Teach and mentor apprentices in how to maintain their fall safety. |  |  |
| Provide crewmembers with regular feedback on fall safety. |  |  |
| Create a positive environment for both safety and productivity. |  |  |