

HEALTH AND SAFETY AT WORK

Curriculum For The Construction Industry

Trainer's Guide

This curriculum was created by El Centro Humanitario. This material was produced under grant SH-20846-SH0 from the Occupational Safety and Health Administration, U.S. Department of Labor. It does not necessarily reflect the views or policies of the U.S. Department of Labor, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.

Agenda

Part 1: A healthy and safe workplace

1. Agenda, Introduction and Attendance
2. Hazards in the Construction Industry
3. Your Rights to Safe and Healthy Work

BREAK

Part 2: What can we do to protect ourselves at work?

1. Personal Protective Equipment
2. Correct Usage of Tools
3. Ergonomics for Workers in the Construction Industry
4. Negotiating for Better Working Conditions

EVALUATION

Class Goals:

Part 1: Workers learn they have the right to be free from hazards at work and about the laws that protect their safety at work.

Part 2: Workers learn to identify their capacity to exercise their rights to safe and healthy work and practice how to protect themselves in their work environment.

Materials for the Class:

Part 1:

- Attendance sheet
- Large paper
- Markers

Part 2:

- Large paper
- Markers
- Evaluation Survey
- Personal Protective Equipment (Gloves, face mask, safety glasses, harness, hard hat, protective clothing, ear plugs)

Handouts:

Part 1:

- Your rights to healthy and safe work
- How To Keep Your Day-Laborer Safe Flyer for Employers

Part 2:

- Tools and Appropriate PPE
- Key-ring safety reference booklet

Part 1: A Healthy and Safe Workplace

1. Agenda, Introduction, and Attendance

Introduce the trainers. Explain the class agenda. Take class attendance.

2. Hazards in the Construction Industry

Body map activity. Read Fernando's testimony. Hazard map activity.

Overview For the Instructor:

The following activities will provide students with the basic tools to recognize common construction injuries and workplace hazards.

ACTIVITY

Body Map

Have a large diagram of a human body on the whiteboard or flip-chart in front of the classroom.

Ask students to come forward and mark an "X" on body parts that they think are being affected by their work.

Explain to students that they can talk to you individually if they do not want to share their injury or illness with the group.

Ask students to explain why they put those marks on the body.

List the injuries and illnesses that are common among workers in the construction industry.

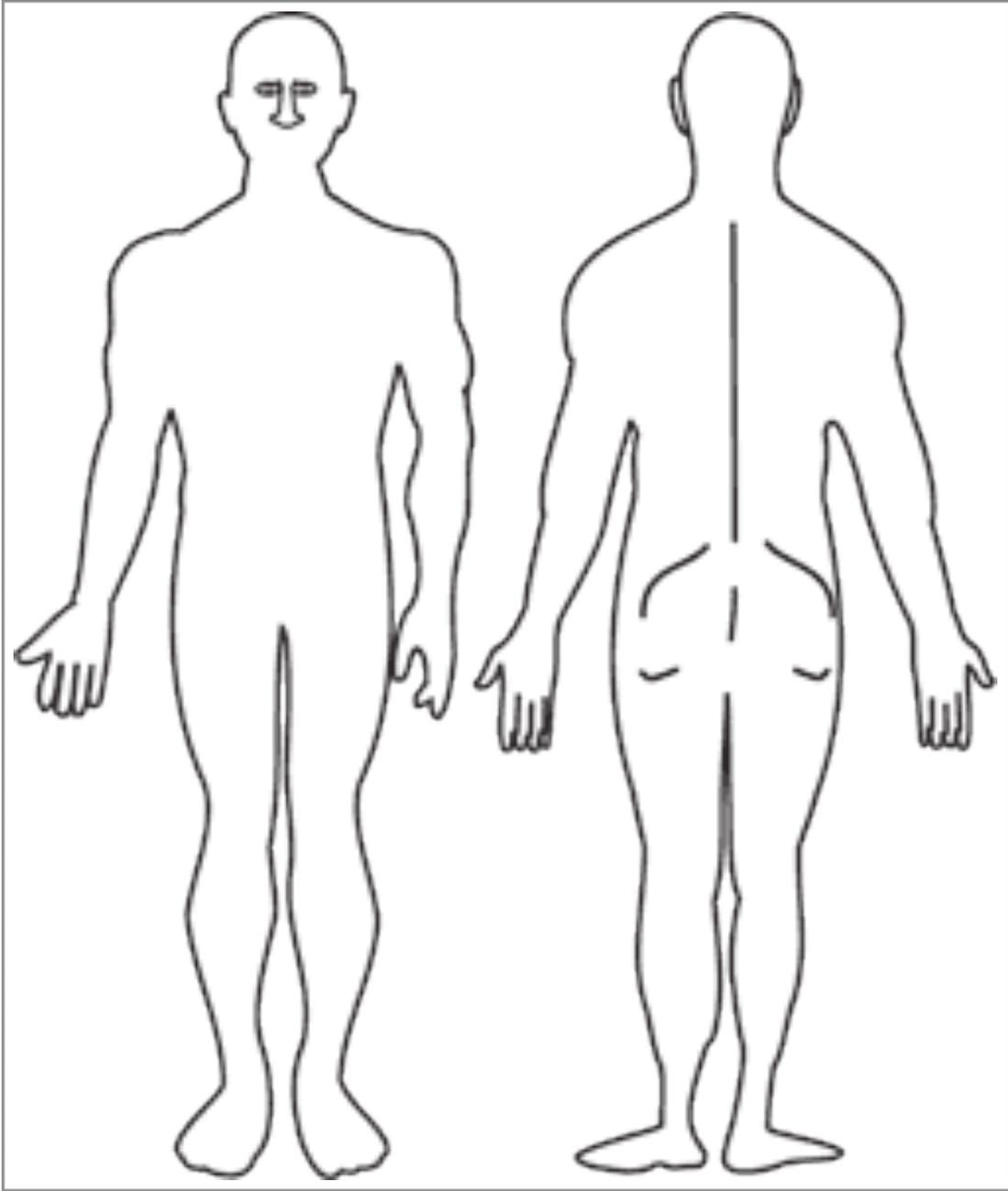
Ask the class to participate in a discussion about this with questions such as:

- **It appears that a lot of you experience very similar injuries.* Why do you think that is?**
- **Why do you think that these injuries occur?**
- **What do you think can be done to reduce the likelihood of injury?**

Make sure to point out close groupings of marks so they can see that many workers experience similar pains and injuries.

See an example of a Body Map on the following page.

Example Body Map



Trainer reads the following:

Fernando's Testimony

"I've had employers who will not even give me gloves or eye protection to protect myself. The safety hazards don't effect the employer because they hire us to do the dangerous jobs so they feel it's okay. Do they think day laborers are a workforce that doesn't need to be safe? They pay us very little. But the little money we make we use to help our family. So the job is good because we can help our family, but from the security point of view it's not right. If I have an accident there will be no insurance or anything to help my family. And all this is caused by the employer's desire to save money. Often day laborers will work under many risks that other workers would not. And that happens because of money. "

Questions for discussion on the testimony of Fernando:

- What do you think about the dangerous conditions at Fernando's work?**
- Can you relate to Fernando's story of working in a dangerous situation because someone has to do the job and because he needs the money for his family?**
- Do you agree with Fernando that there are many hazards in the construction industry?**
- What are some of the risks to health and safety in the construction industry?**
(Answer: Cut fingers, muscle strains, fall hazards, back problems, heat stress, cuts, eye injury, etc.)

Trainer puts the answers on the wall with pictures.

Overview For the Instructor:

These are just some of the dangers. El Centro's recent surveys indicate that day laborers are working some of the most dangerous jobs in the state. The goal of this next activity is to identify hazards at work when doing construction.

ACTIVITY Hazard Map

Students work in small groups to create maps of different types of workplaces. They can use plain paper and markers. To begin, students must draw a floor plan of a workplace in the construction industry. The plan must show work areas, equipment, rooms, etc. Maps can be basic.

When finished, students will decide where hazards are located in their workplaces and mark them. Using the data sheets as a reference, students should mark these places on the floor plan. Use the following codes:

- **Red for safety hazards and physical hazards.**
- **Blue for chemical and biological hazards.**
- **Green for additional hazards.**

You can use color codes or other symbols to indicate hazards. You can, for example, use a different color for safety hazards, physical hazards, chemical hazards and biological hazards.

Remember that the most important objective of this exercise is for the students to identify hazards in their workplaces so don't worry too much that the category is correct.

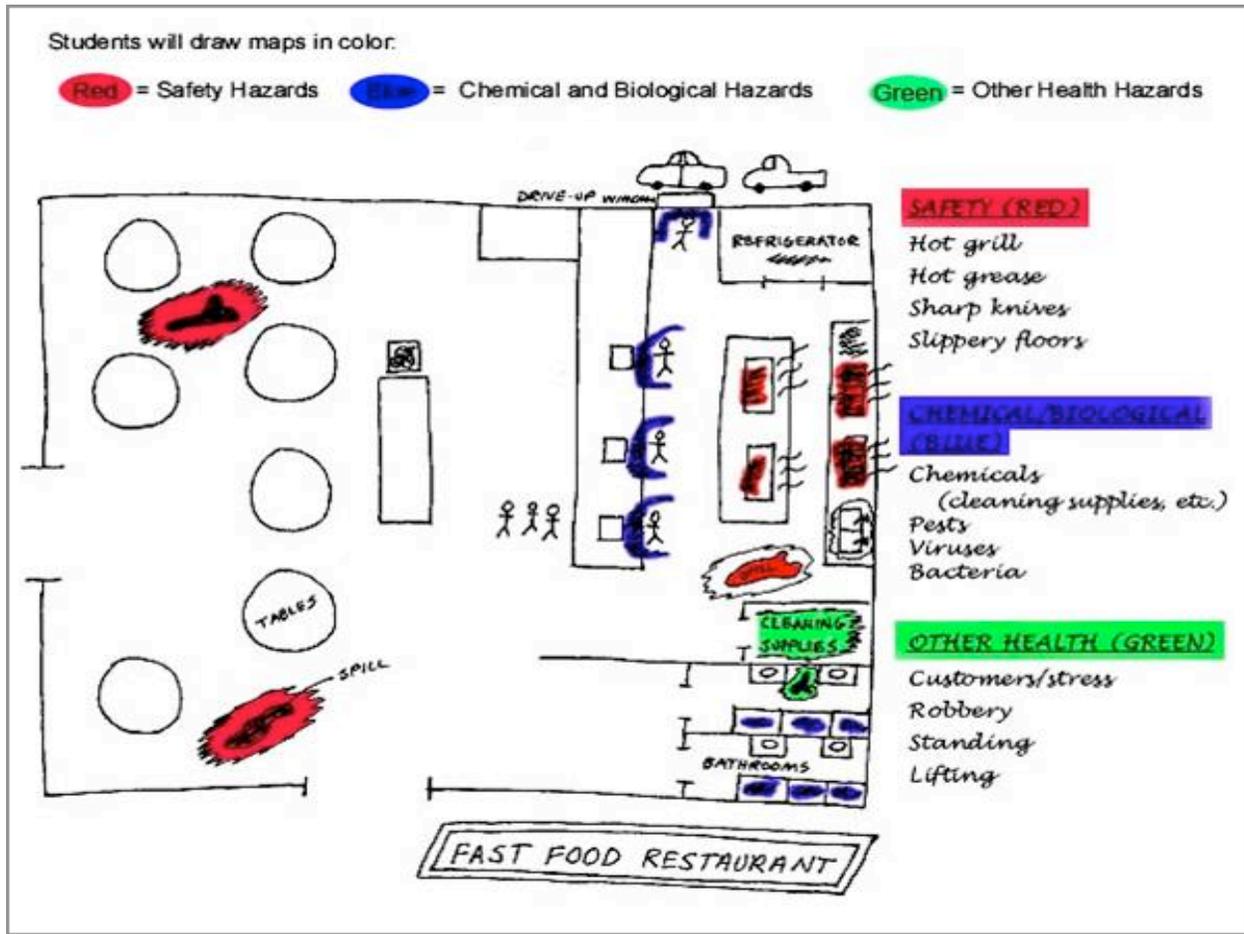
If the student is not sure whether something is dangerous, mark it as a danger and discuss it with the group.

Students should take about 15 minutes to prepare the maps, and then submit them to the group. Put the maps up on the wall. Ask the group to participate in a discussion about the maps with questions like:

- **Are there any comments about these maps?**
- **How can we better protect ourselves from injury at work?**
- **The law requires employers to protect employees. Is it practical to have the expectation that employers provide safety equipment for day laborers?**

See an example of a Hazard Map on the following page.

Example Hazard Map



3. Your Rights to Safe and Healthy Work

Your rights under OSHA activity. Pass out the “Know Your Rights” handout.

Overview For the Instructor:

The following activities will provide students with an introduction to OSHA, their basic rights under OSHA, and the responsibilities of employers to provide a safe and healthy workplace.

Activity **Your rights under OSHA**

[Now, all standing.]

On one wall is a sign that says YES, on another wall is a sign that says NO.

Explain that as you read a series of questions. If they believe the answer is yes, they move to stand below the sign that says YES, if they think the answer is NO, they have to stand under the sign that says NO.

- Do you have the right to a safe and healthy workplace?**

YES

- Do you have the right to receive safety information about the job?**

YES

- Do you have the right to receive training?**

YES

- Are OSHA employees the only ones who can ask employers to change a dangerous work situation?**

NO (You have the right to ask the employer to change the dangerous situation.)

- Do you have the right to make a complaint to OSHA and to participate in the process?**

YES

- Do you have the right to be protected against retaliation?**

YES

- Do you have the right to know which chemical products you used at work?**

YES

- Does your employer have the right to refuse your request to use Protective Personal Equipment at work?**

NO (You have the right to have Protective Personal Equipment at work)

Share a copy of the “Know Your Rights” and “How to Keep Your Day-Laborer Safe” handouts to the workers.

BREAK

Part 2: What can we do to protect ourselves at work?

Overview For the Instructor:

In the following activities, students will learn to identify their capacity to exercise their rights to safe and healthy work and practice how to protect themselves in their work environment.

Activity **Hazard Control**

Using the hazard maps the students created in the previous exercise, work with these groups to choose a danger on their maps they think is important.

Students should then take 5-10 minutes to prepare a brief scenario where they as workers confront their employer to discuss ways the employer can control this risk at work. Discuss with the students the different hazard control methods.

Depending on the needs and size of the classroom, some students may act as employers and others as employees or instructors and employers can act as facilitators. If possible, each student must have a part in who is speaking.

Hazard Control Methods:

Listed by effectiveness

Elimination (Most Effective)

The best way to control a hazard is to eliminate it completely. An example of elimination: Avoid buying products with toxic chemicals to build with.

Substitution

The use of alternative building products that have no toxic chemicals. Products made with natural or non-toxic ingredients.

Engineering

Engineering controls are another way in which technology can be used to change the work environment, machine, or equipment to reduce the danger.

Work /Administrative Controls

A change of administrative controls or work practices means changing the way and the structure of how work gets done. Example: Rather than have an employee exposed to danger for eight hours a day, the employer may be assigned to four workers to work for two hours each. This could be used for repetitive tasks or to any exposure to a chemical hazard.

Personal Protective Equipment (Least effective)

Personal Protective Equipment (PPE) may include, but is not limited to, respirators and protective equipment for eyes, and gloves. PPE is the least effective way to protect workers because it does not eliminate the dangerous situation. If the equipment fails the workers are still exposed to danger.

1. Personal Protective Equipment

Personal Protective Equipment race.

Activity

Personal Protective Equipment Race

Set multiple sets of Personal Protective Equipment (PPE) on a table in front of the group. (Gloves, face masks, safety glasses, hard hats, protective clothing, ear plugs., etc) Divide the class into two teams and have them line up against the wall. The first two students at the front of their lines will be the first to compete against each other in a race.

The instructor will then hold up a tool and ask the first two students which types of personal protective equipment they think they would need for protection when using that tool.

The students will then race to the table to select the appropriate PPE and then back to their team. Each member on their team will then one at a time put on the PPE correctly and say the name of the equipment in English as fast as they can. Whichever team completes these tasks the fastest correctly wins that round.

The game will repeat until each student has a chance to race.

Example of Personal Protective Equipment



2. Correct Usage of Tools

Tool Safety Activity.

Activity Tool Safety

Pass out the “Tools and PPE” handouts to the class. Have students use the handouts as a reference. Ask the Students:

What types of tools and/or types of Personal Protective Equipment (PPE) are used for the following:

- **To nail 2x4s together?**
(Nail Gun/Hammer: Answer on handouts)
- **To cut plastic sheeting?**
(Carpenter's Knife: Answer on handout)
- **To operate a saw?**
(Answer on handout)
- **To operate a power drill?**
(Answer on handout)
- **To hammer metal stakes into the dirt?**
(Sledgehammer: Answer on handout)
- **To operate an air compressor?**
(Answer on handout)

3. Ergonomics for Workers in the Construction Industry

What is ergonomics? Ergonomics and Work Conditions. Practice Safe Lifting Activity.

What is ergonomics?

Ergonomics is the science of designing jobs to accommodate the needs of the worker, rather than making the worker fit the job requirements.

For many workers, ergonomics may not be high on their list of priorities, but the injuries caused by poorly designed work conditions can lead to serious injuries over time. These injuries can occur in the hands, wrists, joints, back, or other body parts. These injuries are called musculoskeletal disorders.

For employers, building a well-designed job can be expensive at first because they may need to spend money on equipment or training. However, injuries resulting from poor working conditions can end up costing more money to the employer in the long run. Employers lose money when employees miss work because of pain or injury, and it is expensive for employers to have to hire and train new workers when other workers quit due to injury or illness.

Activity

Ergonomics and Work Conditions

Ask students for examples of working conditions that can cause injury. Write answers on the board. Emphasize the following points:

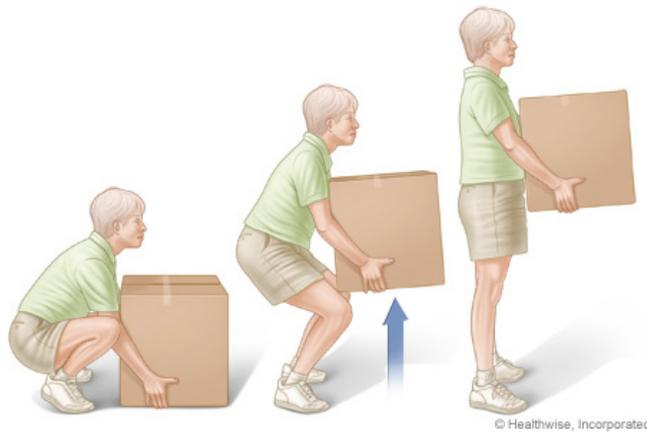
- **Tools and tasks that require you to twist your hands or joints**
- **Tasks that require applying too much pressure on parts of the hand, back, wrists or joints**
- **Tasks that require working with arms outstretched or overhead**
- **Tasks that require working with back arched**
- **Tasks that require lifting or pushing heavy loads**

Activity
Practice Lifting Safely

Have students practice lifting objects safely.

WAYS OF LIFTING SAFELY

- Keep your body close to the object.
- Bend at the hips and knees. Gloves can improve your grip.
- Lift smoothly and slowly, keeping the object close to your body. Keep the position between the knees and shoulders.
- If you have to turn, turn with your feet instead of bending over.



© Healthwise, Incorporated

4. Negotiating for better working conditions

During the rest of the class, we practice exercising our rights to a safe and healthy working environment.

Activity

Let's examine a common situation

Trainer reads the following story

The employer goes to a worker at a construction job-site and says "I need you to go carry plywood up to the roof. The problem is that the other workers are using the taller ladders. In order to reach the roof he would need to stand on the top rung of the ladder and all this while while cutting above his head. The employer says, "You'll be fine. It's a bit unstable, so just be careful. It's already 4pm and I need you to finish by 5pm. Just get the job done. Thanks, I can always count on you!" The worker hesitates because he feels that the job is unsafe...

•**What rights does the worker have?**

•**What can the worker do to help the employer get the job done safely and in a timely manner?** (Answer: Workers can work together using safe ladders, etc.)

•**Why is it important for the worker to communicate and negotiate with the employer?**

(Answers may include: clarifying expectations, understanding the risks they'll be exposed to and minimizing such risks, to talk about the issues, determine their own limits, understanding the employer's interest.)

•**Why is it difficult to negotiate with the employer?**

(Answers may include: fear of losing my job, I think we know what the employer will say, my coworkers are not going to say anything to support me, the solution will cost money and I know my employer will not want to pay.)

In order to negotiate, it's important to remember these values:

As a human being, as a worker, I have value. *Trainer comment:* We must first start valuing ourselves. If we demand better safety and health protections, we must put great importance on our own well-being.

I do not have to remain silent/quiet. *Trainer comment:* We often think that to keep our jobs or for our employers, we must accept its conditions without objection or discussion. We reject that idea, and believe that dialogue leads to new solutions.

There are other options other than just accept or leave. *Trainer comment:* This is similar to the last value. As workers we have more choices than to either remain silent or leave our jobs.

Activity

Steps, Planning, and Tips for Better Negotiation

The Steps of Negotiation:

1. Identify the problem (What is the root of the problem and what do you want?)
2. Planning
3. Start the negotiation (There is no perfect time!)
4. Come to an agreement
5. Monitoring and evaluation
6. The struggle continues ...

How do we plan to negotiate?

1. Choose what you want to negotiate and what you're going to ask for
2. Think of why you're asking. Plan your message and look for the objective (Ex: I want to pay \$ x.00 for x thing)
3. Analyze the perspectives and interests of the opposing party
4. Know the minimum you could accept.
5. Start negotiating!

Tips for negotiating:

- Separate the problem from the person
- Use an attitude of confidence, firmness and respect
- Think about what you are saying with your face and body
- Look for a solution together
- Say what you want to happen - specifically
- Do not attack the person, do not return insults with insults
- Say, "I feel that ..."
- Talk to the interests of the party, "I'm sure you would want someone who does quality work and with whom you can trust."
- Instead of being resolute and locked in your position, look for options
- Ask questions
- Talk about the value of your work
- Listen to the person and relate it back to what you're saying, "I hear you saying _____"
- Use "objective criteria" if possible
- Look forward, not back

Activity
Play- Practicing Rights

Choose two people to act in the play. One will play the role of Juan, the employer who is building a large house and needs to hire a day-laborer for a week. Another student will play the role of Ricardo, a day laborer who will be working for Juan. Juan asks Ricardo to use a ladder balanced on top of an upside down bucket to reach the ceiling in order to complete framing in a window. Ricardo knows that the ladder is unsafe on top of the bucket. Ricardo believes that the job requested of him is not safe and wants access to an extension ladder to reach the window and complete the job.

Ask students:

- **What should Ricardo do?**
- **What other methods can be used to gain what he needs?**
- **What other solutions could be used to rectify this dangerous situation?**

Write their answers on the wall (in general terms/pictures).

Summarize all the tactics discussed in class:

- 1) Know your rights to a healthy and safe work environment
- 2) Learn a few common words and useful phrases in English to help communicate your needs.
- 3) Know the work and dangers, and learn methods of protection.
- 4) Learn about resources that help employers meet their responsibilities, such as low cost methods to protect workers.
- 5) Learn how to negotiate with your employer.
- 6) Learn how healthy and safe working is beneficial to the employer and the employee.

EVALUATION

Double Check Attendance Sheet for Accuracy

Assist Students in Completing the Evaluation Survey

