

Lesson Plan
General Industry Training Program (10-hour)

Topic: Personal Protective Equipment

Overview of the OSHA Standard

OSHA requires employers to protect their employees from workplace hazards through the use of engineering or work practice controls. When these controls are not feasible or do not provide sufficient protection, the use of personal protective equipment (PPE) is required.

Employers are required to assess the workplace to determine if hazards are present, or are likely to be present, which necessitates the use of PPE. If employees use PPE, employers must establish general procedures, called a *PPE Program*, to give employees necessary protective equipment and to train them to use it properly.

Step 1: Planning the Lesson

• **Instructional Materials.**

1. PowerPoint presentation
2. Instructor notes.
3. Other materials.

• **Instructional Objectives.**

1. Complete the required topics for the OSHA 10-hour course.
2. Complete the following optional topics:
 - a.
 - b.
 - c.
3. Present *Personal Protective Equipment* to [number] participants.
4. Incorporate active participation in each lesson.
5. Provide a quiz or short evaluation at the end of the course.
6. Ensure feedback from participants at various points in the training.

• **Guest Speakers/Presenters and Topics/Responsibilities.**

Step 2: Presenting the Lesson

• **Lesson Introduction**

Introductory remarks or transition from previous lesson.

- **Learning Objectives/Outcomes.**

Upon completion of the lesson, participants will be able to:

1. Describe the two primary means of protecting employees from workplace hazards prior to considering personal protective equipment (PPE).

Possible responses.

- **Engineering Controls.** Physically change the machine or work environment to prevent employee exposure to a potential hazard.
 - isolate the process
 - enclose the process
 - consider design specifications
 - change the process
 - use proper ventilation
 - substitute less harmful material
- **Work Practice Controls.** Remove employees from exposure to the potential hazard by changing the way they do their jobs.
 - Use of wet methods to suppress dust.
 - Personal hygiene.
 - Housekeeping and maintenance.
 - Job rotation of workers.

2. Explain what should be included in PPE training.

Possible responses.

Training should give the employees information and hands-on experience with the PPE. This includes:

- guidance on when PPE is necessary
- specifics about what types of PPE are necessary under certain circumstances
- practice to properly put on PPE, take it off, adjust and wear it
- information about limitations of PPE
- guidance about the proper care, maintenance, useful life and disposal of PPE

• **Learning Objectives/Outcomes. (Continued)**

3. List PPE that may be used to protect the eye, face, head, feet, hands/arms, bodies and hearing.

Possible responses.

- Eyes - goggles, safety glasses and face shields
- Face – shields
- Head – hard hats
- Feet - safety shoes
- Hands/Arms – gloves and sleeves
- Body – coveralls, body suits, vests, aprons
- Ears/Hearing – earplugs, ear muffs, canal caps

4. Identify hazards that are lessened or eliminated by using the appropriate PPE for eye protection, hearing protection, foot and hand protection, face protection and body protection.

Possible responses.

- **Goggles and safety glasses** protect against:
 - dust, flying particles, shavings or sawdust
 - splashes from molten metal, acids or chemicals
 - splashes from blood or potentially infectious body fluids that might splash, spray, or splatter
 - intense light caused by welding tools or lasers
- **Face shields** protect against:
 - nuisance dusts
 - potential splashes or sprays of hazardous liquids
 - intense light caused by welding tools or lasers
- **Hard hats** protect against:
 - falling objects
 - bumping head against fixed objects
 - contact with exposed beams or pipes
 - contact with electrical conductors
- **Ear plugs, ear muffs and canal caps** protect against:
 - intermittent, sudden or prolonged exposure to high decibel sounds
- **Safety shoes** protect against:
 - heavy objects falling on or rolling against the foot
 - exposure to nails or other sharp objects that might pierce the foot
 - molten metal that might splash on the foot
 - hot, wet, or slippery surfaces

- **Learning Objectives/Outcomes. (Continued)**

- **Gloves** protect against:
 - burns, bruises, abrasions, cuts, and punctures
 - fractures and amputations
 - chemical exposure
- **Coveralls, body suits, vests, sleeves and aprons** protect against:
 - intense heat
 - splashes of hot metal or other hot liquids
 - impacts from tools, machinery, or materials
 - cuts
 - hazardous chemicals
 - contact with potentially infectious material like blood
 - radiation

- **Planned Activities, Discussion or Participant Interaction**

Step 3: Evaluating Student Learning and Instruction

- **Lesson Evaluation and Comments.**

References

OSHA Standard

- 29 CFR 1910 Subpart I (1910.132 to 1910.139)
 - http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10118

OSHA Publications

- <http://www.osha.gov/OshDoc/Additional.html>
- 3077 Personal Protective Equipment
- 3080 Hand and Power Tools
- 3151 Assessing the Need for Personal Protective Equipment: A Guide for Small Business Employers

OSHA References/Resources

- OSHA's Small Business Outreach Training Program, Personal Protective Equipment
 - <http://www.osha.gov/SLTC/smallbusiness/sec7.html>
- OSHA Technical Links – Personal Protective Equipment
 - <http://www.osha.gov/SLTC/personalprotectiveequipment/index.html>
- Self-Inspection Checklists
 - <http://www.osha.gov/SLTC/smallbusiness/chklist.html#PPE>