



Training Solutions, Delivered!

PERSONAL PROTECTIVE EQUIPMENT

***As Part of the OSHA 10 Hour
Training for General Industry***

**Leader's Guide, Fact Sheet
& Quiz**

This easy-to-use Leader's Guide is provided to assist in conducting a successful presentation.

PREPARING FOR THE MEETING

Here are a few suggestions for using this program:

- a) Review the contents of the Fact Sheet that immediately follows this page to familiarize yourself with the program topic and the training points discussed in the program. The Fact Sheet also includes a list of Program Objectives that details the information that participants should learn from watching the program.
- b) If required by your organization, make an attendance record to be signed by each participant to document the training to be conducted.
- c) Prepare the area and equipment to be used for the training. Make sure the watching environment is comfortable and free from outside distractions. Also, ensure that participants can see and hear the TV screen or computer monitor without obstructions.
- d) Make copies of the Review Quiz included at the end of this Leader's Guide to be completed by participants at the conclusion of the presentation. Be aware that the pages containing the answers to the quiz come before the quiz itself.

CONDUCTING THE PRESENTATION

- a) Begin the meeting by welcoming the participants. Introduce yourself and give each person an opportunity to become acquainted if there are new people joining the training session.
- b) Introduce the program by its title and explain to participants what they are expected to learn as stated in the Program Objectives of the Fact Sheet.
- c) Play the program without interruption. Upon completion, lead discussions about your organization's specific policies regarding the subject matter. Make sure to note any unique hazards associated with the program's topic that participants may encounter while performing their job duties at your facility.
- d) Hand out copies of the review quiz to all of the participants and make sure each one completes it before concluding the training session.

5061 PERSONAL PROTECTIVE EQUIPMENT
As Part of the OSHA 10 Hour Training for General Industry
FACT SHEET

VIDEO LENGTH: 27 MINUTES

COURSE DURATION: 1 HOUR

PROGRAM SYNOPSIS:

This program provides one hour of training on Personal Protective Equipment, which is one of the six mandatory training topics selected by OSHA as part of its 10 Hour Training for General Industry Program. In addition to the six hours of training on required topics, OSHA requires four more hours of instruction on various elective topics. The combination of required training and elective training must total 10 hours. The 27-minute video presentation in this program, when combined with the included sectional review quiz questions, will provide approximately one hour of training on Personal Protective Equipment.

The content in this program is not certified by OSHA, but may be used by an organization as part of a training curriculum which is equivalent to that provided in OSHA's 10 Hour General Industry Training.

Personal protective equipment, or PPE, consists of various types of equipment, gear or clothing, that is designed to prevent or minimize injury when the user is exposed to a hazard. An employer is required to assess the hazards and then select, provide and require the PPE to be used by employees performing those tasks. Various OSHA standards as well as best practice documents enforced through the general duty clause mandate what specific PPE shall be used. This program discusses the various types of PPE available and which hazards they protect against and how to properly don and use these devices.

Types of PPE covered include hardhats, eye and face protection, respirators, hearing protection, gloves, foot protection and protective clothing. The hierarchy of hazard controls and employer and employee PPE responsibilities are also explained in the program.

PROGRAM OBJECTIVES:

Upon completion of the program, viewers should be able to explain the following:

- How the employer uses the hierarchy of controls to protect workers from hazards;
- What the responsibilities are for the employer and the employee in regard to PPE;
- What types and classes of hardhats are available and what hazards they protect against;
- What forms of eye and face protection are required for protection from specific hazards;
- What the various types of respirator and the level of protection each provides;
- How and when to wear earplugs, canal caps and/or earmuffs;
- What types of gloves and safety footwear should be worn for different hand and foot hazards.

INSTRUCTIONAL CONTENT:

SECTION 1: PPE and the Hierarchy of Controls

- Personal protective equipment, or PPE, consists of various types of equipment, gear or clothing that is designed to prevent or minimize injury when the user is exposed to a hazard.
- Some common examples of personal protective equipment include hardhats, hearing protection, safety glasses and steel-toed safety footwear.
- Personal protective equipment is often called the "last line of defense" in the effort to protect workers from hazards.
- This is because there are many more effective ways to protect workers from workplace hazards. In fact, the National Institute of Occupational Safety and Health requires employers to follow a specific "hierarchy of controls" when it comes to eliminating or controlling workers exposure to hazards.
- This hierarchy of hazard control has also been adopted by OSHA. The hierarchy of hazard control must begin with Hazard Elimination. Those hazards that can be successfully removed from the workplace must be removed so the hazard is eliminated.

- Next in the hierarchy of controls is Substitution. When elimination of the hazard is not possible, the substitution of less hazardous equipment and materials must be the next consideration.
 - A successful hazard substitution will reduce the potential severity of the hazard or the frequency of exposure to the hazard.
 - The third option in the hierarchy of controlling hazards is Engineering Controls. Engineering Controls are typically some type of modification to equipment or processes that reduce the likelihood, frequency, severity or consequences of an exposure to a hazard.
 - One example of Engineering Controls would be the installation of a ventilation system to remove harmful vapors from an area rather than relying on employees to wear respirators. Other examples of Engineering Controls include installing guard rails, machine guards and electric cover plates.
 - The fourth option in the hierarchy of controls are Administrative Controls. Administrative controls include safe work practices and procedures worker training, work scheduling, permit systems, inspections and audits, warning and danger signage, barricading and similar measures.
- Finally, the last choice in the hierarchy of controls used to protect workers from hazards is requiring the use of personal protective equipment.
- The effectiveness of PPE in providing protection against the intended hazard depends on a variety of things, including:
 - A proper assessment of the hazard and determination of the necessary PPE,
 - Effective worker training in the proper selection and use of the PPE,
 - Proper care, maintenance and storage of the PPE,
 - 100 percent worker compliance with the use of the PPE when potentially exposed to the hazard.

SECTION 2: Employer and Employee Responsibilities

- The employer must do a thorough assessment of the hazards in the workplace and then follow the hierarchy of controls to eliminate, reduce and control those hazards.
- If it is determined that personal protective equipment must be used, then the employer must determine which types of protective equipment are required.
- There are several OSHA standards that require the use of PPE and several others that regulate the technical specifications of certain PPE.
- With few exceptions, OSHA requires employers to pay for personal protective equipment used to comply with OSHA standards. Examples include rubber boots with steel toes, non-prescription eye and face protection, hardhats and hearing protection.
- Employers are not required to pay for non-specialty safety-toed shoes or boots, non-specialty prescription safety eyewear, everyday clothing, winter weather garments or lifting belts.
- Employers are also not responsible for replacing PPE that has been lost or intentionally damaged by the employee.
- Employers cannot require workers to provide their own personal protective equipment and workers' use of PPE they already own must be completely voluntary.
- Even when a worker does voluntarily provides his or her own PPE, the employer must still ensure that the equipment is adequate to protect the worker from the hazards present in his or her work environment.
- Before being asked to perform any task which requires protective equipment, a worker must be trained on the proper selection and use of the particular equipment to be worn.
- The worker must be able to demonstrate that he or she understands how the equipment is to be used and what situations require its use.
- Any worker who has questions about their protective equipment should ask their supervisor for assistance prior to beginning any job task.
- In order to select appropriate PPE, it is important for workers to become familiar with any potential hazards in their work area, especially when entering parts of the facility that are unfamiliar or when performing new job tasks.
- Signs, labels, safety data sheets and other sources of information can alert you to potential hazards in the work environment and may also indicate any required PPE.
- If you are a worker required to use PPE, keep in mind that 100 percent PPE compliance is a required duty of your job and doing so is your responsibility.

SECTION 3: Hardhats

- You must wear a hardhat in any situation where there is the potential for a head injury from falling or moving objects, there is a risk of striking the head on stationary objects or there is potential to contact exposed, energized electrical parts.
- A standard hardhat must be able to withstand a 40-foot-pound impact, which is the equivalent of a one-pound hammer falling 40 feet. To do this, a hardhat consists of two parts: the outer shell and the inner suspension system.
- The inner suspension system is designed to absorb the impact of a striking object.
- The effectiveness of the suspension system is reduced if objects are placed between it and the outer-shell. Storing items inside a hardhat in this manner is prohibited.
- The hardhat is designed to be worn forward at all times, with the bill of the hat in front to provide additional protection to the nose and face.
- Wearing a hardhat backwards can reduce its effectiveness in providing protection and is prohibited; however, for certain applications, such as welding, OSHA will allow the outer shell to be worn backwards as long as the inner shell continues to face forward.
- This requires the suspension system to be removed, rotated 180 degrees and reinstalled. This allows the bill of the hat to help protect the back of the neck from sparks and slag while welding and also allows additional PPE to be attached to the front of the hardhat without interference from the bill of the hardhat.
- Hardhats are divided into types and classes. Hardhats rated Type I are designed to protect against a direct impact to the top of the hardhat; hardhats rated Type II are designed to protect against both top and side impacts.
- As far as electrical protection is concerned, hardhats rated as conductive, or Class C, offer no electrical protection and should not be used near energized parts.
- A general-purpose Class G hardhat is rated for up to 2,200 volts, while a Class E hardhat, designed for electrical work, is rated up to 20,000 volts.
- To ensure maximum protection, make sure your hardhat fits correctly. Adjust the headband so the shell does not touch your head. There should be approximately one-inch clearance between the shell and the head.
- Hardhats should be kept as clean as possible and be inspected for damage frequently. During an inspection, look for cracks, brittleness, fading or a chalky appearance. These are indications of damage from excessive exposure to sunlight or chemicals.
- If this type of damage is found, the hat must be removed from service and replaced.
- The hardhat's suspension system and inner shell must also be inspected. Inspect the webbing and all parts of the suspension system for damage as well as for proper installation.
- Also, check the expiration date that is imprinted on the inside of the hat by the manufacturer. It is recommended that a hardhat be replaced every five years, if not sooner.

SECTION 4: Eye and Face Protection

- Eye and face protection is so commonly required because the hazards presented by the flying debris that is generated by many activities and operations is hard to control and is often unpredictable.
- Standard safety glasses are designed to protect our eyes against small amounts of flying debris. Safety glasses are impact-resistant and have shatterproof lenses.
- The technical specifications for safety glasses are contained in ANSI Z87.1. OSHA has adopted this ANSI standard into law and requires that all safety glasses be stamped with its number on the lens or frame to certify its compliance.
- As an added level of protection, many facilities require safety glasses with side shields as the minimum level of mandatory eye protection for all workers. Side shields extend the protective zone to include the side of the eye area; however, safety glasses with side shields do not provide enough protection for all situations.
- Work that generates an abundance of small particles or work that may lead to the splashing or spraying of hazardous liquids, will require safety goggles for additional eye protection.
- Safety goggles provide a complete seal around the eyes and prevent particles and liquids from entering the eye area.
- Many jobs which generate significant eye hazards also create hazards to our face, but keep in mind that eye protection is not designed to protect your face and face protection is not designed to protect your eyes. Anytime face protection is required, you must also wear eye protection.
- Complete face protection is required when performing jobs such as chipping and grinding. Face protection is also required when performing jobs which place you at risk of being splashed or sprayed with a hazardous liquid or chemical.
- In addition, some electrical tasks require an arc-rated face shield to protect against an arc flash.

- When face protection is required, choosing a face shield that extends below the chin provides maximum protection.
- Keep in mind that potential eye hazards are everywhere, and many eye injuries occur to workers and pedestrians who are simply passing through a work area and are not wearing appropriate protection. Always wear the appropriate eye protection for any area into which you enter, even if you are not planning on doing any work.

SECTION 5: Protection from Harmful Light

- Workers whose jobs involve the use of lasers or those who perform welding operations must be protected from ultraviolet light.
- Laser operators must match their eye protection to the wavelength of the specific laser beam being used.
- Be aware that safety eyewear for lasers looks similar to other safety eyewear. Make certain you have selected the proper eye protection for the laser you plan to use.
- Before performing welding operations, select a lens appropriate for the intensity of the light to be produced. You should choose the darkest shade that still allows adequate vision for the job.
- Be aware that lenses lose their effectiveness over time and should be changed periodically.
- If auto-darkening lenses are used, make sure you fully understand how to adjust and operate your lens before use.

SECTION 6: Respiratory Protection

- If it is determined that potential airborne hazards exist, your organization will implement a written respiratory protection program designed to protect workers from the adverse health effects of airborne contaminants while working.
- Before wearing respiratory protection, you must undergo a medical evaluation to determine if you can safely wear a respirator.
- In addition to the medical evaluation, you must also undergo a fit test procedure before being permitted to wear a respirator.
- A fit test ensures the ability to achieve a proper fit and seal and is critical to the effective use of a respirator. A fit test must be conducted at least once a year while you are in the respiratory program.
- One type of respirator is a NIOSH-approved dust mask. NIOSH stands for the National Institute for Occupational Safety and Health.
- NIOSH-approved dust masks are effective when used around dust, but they do not provide protection against gases or vapors.
- A single-strap dust mask like this one, is not NIOSH approved and provides no significant protection against hazardous substances. Only use a NIOSH-approved dust mask when protection from harmful dusts or particles is required.
- Another type of respirator is the half or full face mask which supports replaceable filters. These types of respirators provide a better seal than a dust mask.
- Also referred to as a chemical cartridge respirator, they are designed to provide protection from the gases and vapors of hazardous chemicals by utilizing specific cartridges which are designed to filter out the harmful substances associated with specific chemicals.
- Before using a chemical cartridge, respirator make sure you have selected the proper cartridge for the expected hazard.
- Also, you must conduct both a positive pressure and negative pressure seal check with each use to make sure a proper seal has been achieved.
- Similar to chemical cartridge respirators, a respirator known as a powered-air purifying respirator, or PAPR, pushes air through a cartridge with a blower.
- The use of the blower greatly reduces the breathing resistance as compared to a half or full-face respirator and a PAPR can be fitted with a loose-fitting hood to allow for facial hair. PAPR's are sometimes preferred over other types of respirators due to their flexibility and comfort.
- There are some environments that are oxygen-deficient or have such high concentrations of harmful gases or fumes that they are "immediately dangerous to life and health." These types of environments are referred to as an IDLH environment or an IDLH atmosphere.
- For adequate protection in an IDLH atmosphere, a self-contained breathing apparatus, SCBA, or a supplied-air respirator, SAR, must be used.

- Remember, a respirator is your last line of defense against various airborne contaminants, always use it when required; however, a respirator cannot provide the appropriate protection if used improperly.
- Be sure to select the appropriate cartridge for the hazard. Always conduct a seal check before each use and make sure the type of respirator used is designed to provide the appropriate protection for the environment being entered.

SECTION 7: Hearing Protection

- Another hazard from which we must protect ourselves is noise. Because noise is an unseen hazard, many people don't understand its harmful effects; however, noise exposure is a serious issue and can cause permanent hearing loss if protection is not used.
- To help prevent hearing loss OSHA created their standard 1910.95 titled "Occupational Noise Exposure," which requires companies to develop a hearing conservation program when workplace sound levels average 85 decibels over an eight-hour time-weighted period.
- The development of this program begins with a noise assessment to determine the noise levels in the work environment. This assessment will determine what areas require the use of hearing protection and the type of protection that is required.
- The most common type of hearing protection comes in the form of earplugs or canal caps.
- Earplugs are available in a variety of sizes and may be disposable or reusable. Earplugs are designed to be inserted into the ear canal.
- Earplugs must fit correctly and be installed properly in order to provide their rated protection.
- To properly install disposable earplugs, first make sure your hands are clean. Then roll the plug in your fingers to compress it then insert the plug into your ear canal.
- Once inserted, hold your finger tip on the end of the plug for a few seconds while the plug expands to fill your ear canal. Then repeat on the opposite ear.
- Another type of hearing protection are canal caps. Canal caps have flexible tips on a molded headband and only cover the entrance to the ear canal.
- Canal caps generally provide less noise reduction than earplugs and may not be appropriate for high noise areas; however, they are easier to install properly, and some people find them more comfortable.
- Canal caps are ideal for jobs in which hearing protection must be put on and taken off frequently.
- Earmuffs are another common type of hearing protection. Earmuffs cover the ears completely and consist of a pair of cups connected by a headband.
- Some earmuffs are designed for use with other PPE such as hardhats. Some people find earmuffs to be more comfortable than earplugs or canal caps.
- In very loud environments, earplugs can be worn in combination with earmuffs for increased noise reduction. This is sometimes referred to as "dual hearing protection."
- Hearing protection devices have a Noise Reduction Rating, or NRR. Devices with a higher noise reduction rating offer more protection than those with a lower rating.
- The employer is responsible for determining the appropriate noise reduction rating for the required hearing protection in each work area.
- Make sure you use the correct hearing protection for the work you plan to perform.

SECTION 8: Hand Protection

- To protect our hands, we must make sure to select the proper type of glove for the job. This is important because there is no one glove that provides effective protection for all tasks.
- For example, cloth gloves can protect our hands from minor hazards and help prevent scrapes, scratches, blisters and rashes.
- Heavy leather gloves are good for handling materials with sharp edges, burrs, splintering wood and similar objects which pose both cutting and puncture hazards.
- Various types of cut-resistant gloves are available for handling sharp objects such as sheet metal and also provide protection while cutting with knives.
- Heavy leather gloves such as those used by welders can provide some protection from heat and sparks, but even these gloves are not intended for direct contact with extremely hot materials.
- To help select the proper glove for the job, check the glove manufacturer's recommendations to determine if the glove you are considering will protect you against the hazards of a particular job.

- When working with chemicals, you can refer to section eight of the substance's Safety Data Sheet to see which type of glove is required when handling the chemical.
- Protection against corrosive chemicals is generally provided by gloves made of rubber, vinyl or neoprene.
- There are a wide variety of specialized gloves, such as aluminized gloves to protect against intense heat, di-electric gloves to prevent electric shock and disposable rubber, latex or plastic gloves used to protect against exposure to infectious materials and bloodborne pathogens.
- No matter which type of glove you use, they should be inspected frequently for damage. Look for rips, holes and other defects in your gloves. If you notice any damage that compromises their protective qualities, replace them.
- It's important to select gloves which fit comfortably. Uncomfortable gloves are frequently removed, leaving hands unprotected and gloves that are too big make it hard to hold and grip objects and may pose a hazard around moving machinery.
- Like all other types of PPE, gloves are not effective if they are not worn. Always wear gloves when required and take the time to change gloves when you change job tasks and the hazards change.

SECTION 9: Foot Protection

- It's important to understand that open-toe shoes such as sandals or shoes made of lightweight fabrics such as running shoes do not provide any protection from typical workplace hazards and should not be worn.
- At a minimum, workplace shoes should consist of a sole which provides good traction, an enclosed toe box and is constructed of solid leather sides and uppers.
- This type of shoe provides protection from the minor bumps and impacts which can occur in a workplace, but in many work environments the minimal protection provided by a basic pair of sturdy shoes is not enough.
- Many industrial and manufacturing operations will require additional foot protection in the form of safety shoes and boots with a reinforced toe box and puncture-resistant soles.
- A reinforced toe box helps protect the toes from being crushed from impacts while puncture-resistant soles can prevent sharp objects from penetrating the bottom of our foot.
- In some environments, protection of the top of the foot, the metatarsal area, may be required. Some safety boots and shoes provide this protection in the form of metatarsal guards. Metatarsal guards may also be attached separately.
- Many safety shoes do not outwardly appear to be much different than regular shoes, but never forget that safety shoes or boots provide protection from punctures and impacts while regular shoes do not.
- Wearing the proper protective footwear for the environment in which you work is an important part of staying safe.

SECTION 10: Protective Clothing

- Employees who face possible bodily injury of any kind that cannot be eliminated through Engineering, Work Practice or Administrative Controls, must wear appropriate body protection.
- There are many varieties of protective clothing available for specific hazards. Examples of body protection include laboratory coats, coveralls, aprons and full body suits.
- If a hazard assessment indicates a need for full body protection against toxic substances or harmful physical agents, the clothing should be carefully inspected before each use, it must fit each employee properly and it must function properly and for the purpose for which it is intended.
- In addition, the related OSHA standard or current best practices document for the activity should be well understood so that the required PPE may be selected.
- For example, OSHA requires employees who work in hazardous waste operations to adhere to four levels of PPE depending on the level of protection required and also requires qualified electrical workers to wear a particular level of arc-rated protection depending on the magnitude of the arc flash hazard that exists.

SECTION 11: Conclusion

- There are many specific types of jobs to be performed and many unique and specific types of PPE designed to provide protection to workers performing that task.
- An employer is required to assess the hazards and then select, provide and require the PPE to be used by employees performing those tasks.
- Various OSHA standards as well as best practice documents enforced through the general duty clause mandate what specific PPE shall be used.

- If you are an employee who may be required to use personal protective equipment make sure you know and understand what you are required to wear, how to properly don and use the PPE, how to care for and store the equipment and above all that you always wear the PPE when required.
- Remember, PPE is the last line of defense against hazards and it does you no good if it is not used.

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ANSWERS TO THE REVIEW QUIZ

SECTION 1: PPE and the Hierarchy of Controls

1. b
2. a
3. a
4. e

SECTION 2: Employer and Employee Responsibilities

1. a
2. b
3. d
4. a

SECTION 3: Hardhats

1. c
2. a
3. b
4. b
5. a

SECTION 4: Eye and Face Protection

1. a
2. a
3. b

SECTION 5: Protection from Harmful Light

1. c
2. b
3. a

SECTION 6: Respiratory Protection

1. b
2. a
3. b
4. d
5. a

SECTION 7: Hearing Protection

1. a
2. a
3. b
4. b

SECTION 8: Hand Protection

1. a
2. b
3. c
4. a

SECTION 9: Foot Protection

1. a
2. b
3. b

SECTION 10: Protective Clothing

1. a
2. d
3. c

PERSONAL PROTECTIVE EQUIPMENT
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REVIEW QUIZ

The following questions are provided to determine how well you understand the information presented in this program.

Name _____ Date _____

SECTION 1: PPE and the Hierarchy of Controls

1. Personal protective equipment is often called the _____ in the effort to protect workers from hazards.
 - a. First line of defense
 - b. Last line of defense
 - c. Final level of controls

2. The hierarchy of hazard control must begin with _____.
 - a. Hazard Elimination
 - b. Substitution
 - c. Engineering controls
 - d. Administrative controls

3. A successful hazard substitution will reduce the potential severity of the hazard or the frequency of exposure to the hazard.
 - a. True
 - b. False

4. Which of the following are considered Administrative Controls?
 - a. Work scheduling
 - b. Permit systems
 - c. Inspections and audits
 - d. Warning and danger signage
 - e. All of the above

SECTION 2: Employer and Employee Responsibilities

1. With few exceptions, OSHA requires employers to pay for personal protective equipment used to comply with OSHA standards.
 - a. True
 - b. False

2. Employers are responsible for replacing PPE that has been lost or intentionally damaged by the employee.
 - a. True
 - b. False

3. Before being asked to perform any task that requires PPE, you must _____.
 - a. Be trained on its proper selection and use
 - b. Understand which situations require its use
 - c. Be able to demonstrate its proper use
 - d. All of the above

4. If you required use PPE, 100 percent PPE compliance is a required duty of your job and doing so is your responsibility.

- a. True
- b. False

SECTION 3: Hardhats

1. A standard hardhat must be able to withstand a _____.

- a. 10 foot-pound impact
- b. 20 foot-pound impact
- c. 40 foot-pound impact

2. A hardhat is designed to be worn forward at all times, but OSHA allows the outer shell to be worn backwards during welding and other specific applications as long as the inner shell continues to face forward.

- a. True
- b. False

3. Which type of hardhat is designed to protect against both top and side impacts?

- a. Type I
- b. Type II

4. A Class G hardhat is rated for up to 20,000 volts of electrical protection.

- a. True
- b. False

5. It is recommended that a hardhat be replaced every _____ years, if not sooner.

- a. 5 years
- b. 7 years
- c. 10 years

SECTION 4: Eye and Face Protection

1. Safety glasses with side shields do NOT provide enough protection for all situations.

- a. True
- b. False

2. Anytime face protection is required, you must also wear eye protection.

- a. True
- b. False

3. Eye protection is NOT required if you are only passing through a work area with no intention of performing any work.

- a. True
- b. False

SECTION 5: Protection from Harmful Light

1. Laser operators and welders must protect their eyes from _____ light.

- a. Diffused
- b. Specular
- c. Ultraviolet

2. It is easy to determine the proper laser safety eyewear because it looks substantially different from other forms of eye protection.
 - a. True
 - b. False

3. When welding, you should choose the darkest lens shade that still allows adequate vision for the job.
 - a. True
 - b. False

SECTION 6: Respiratory Protection

1. A respirator fit test must be conducted at least once _____ while you are in the respiratory program.
 - a. Every 6 months
 - b. Every year
 - c. Every 2 years
 - d. Every 3 years

2. NIOSH-approved dust masks are effective when used around dust, but they do not provide protection against gases or vapors.
 - a. True
 - b. False

3. All cartridges utilized by chemical cartridge respirators are designed to filter out all of the harmful substances you may encounter.
 - a. True
 - b. False

4. Which of the following is a benefit of using a powered air-purifying respirator (PAPR)?
 - a. It reduces breathing resistance
 - b. It can be worn with facial hair
 - c. It provides flexibility and comfort
 - d. All of the above

5. For adequate protection in an IDLH atmosphere, a self-contained breathing apparatus (SCBA) or a supplied-air respirator (SAR) must be used.
 - a. True
 - b. False

SECTION 7: Hearing Protection

1. OSHA's Noise Exposure Standard requires companies to develop a hearing conservation program when workplace sound levels average _____ over an 8-hour time-weighted period.
 - a. 85 decibels
 - b. 95 decibels
 - c. 100 decibels

2. Earplugs must fit correctly and be installed properly in order to provide their rated protection.
 - a. True
 - b. False

3. Canal caps generally provide _____ noise reduction than earplugs.
 - a. More
 - b. Less
4. Hearing protection devices with a lower noise reduction rating offer more protection than those with a higher rating.
 - a. True
 - b. False

SECTION 8: Hand Protection

1. No one glove provides effective hand protection for all tasks.
 - a. True
 - b. False
2. Heavy leather gloves such as those worn while welding provide protection from heat, sparks and direct contact with extremely hot materials.
 - a. True
 - b. False
3. When working with a chemical, you should refer to _____ of the substance's Safety Data Sheet to see which type of glove is required.
 - a. Section 2
 - b. Section 5
 - c. Section 8
 - d. Section 12
4. If you notice any damage to your gloves that compromise their protective qualities, you should replace them.
 - a. True
 - b. False

SECTION 9: Foot Protection

1. Sandals and running shoes do not provide any protection from typical workplace hazards and should not be worn at work.
 - a. True
 - b. False
2. _____ can prevent sharp objects from penetrating the bottom of our feet.
 - a. A reinforced toe box
 - b. Puncture-resistant soles
 - c. Metatarsal guards
3. Wearing the proper protective footwear for the environment in which you work is NOT an important part of staying safe.
 - a. True
 - b. False

SECTION 10: Protective Clothing

1. Employees who face possible bodily injury of any kind that cannot be eliminated through Engineering, Work Practice or Administrative Controls must wear appropriate body protection.
 - a. True
 - b. False

2. Which of the following is NOT an example of protective clothing?

- a. Laboratory coats
- b. Aprons
- c. Full body suits
- d. Denim jeans

3. Protective clothing to be worn should be carefully inspected _____.

- a. Weekly
- b. Monthly
- c. Before each use