

Student name: _____ Date: _____

Describe general occupational safety practices and procedures.

Objectives:

- A. Identify various causes of accidents as they relate to environmental hazards or human error.
- B. Identify various accident prevention steps in relation to lifting and other basic work tasks.

MODULE 5A: INFORMATION SHEET

TO THE STUDENT: Read and study the following information sheet and then complete the student activities at the end of this module.

Definition of safety

Did you ever ask yourself “Why so many accidents happen?” Why are teenagers being injured at an alarming rate? Studies show us that teenage injuries happen not in just the “hazardous” types of jobs but “everywhere teenagers work. Since Cooperative Education is about work related issues, it seems appropriate to take a close look at the issue of health and safety for the young worker.

First, let's think of a definition for safety. Think about it for a moment. You want some key words in the definition that convey the importance of safety and the need to be PREPARED to act safely. Well, here comes the definition. Pay special attention to the ***bold, italicized words!***

“Safety is to be ***aware*** and ***knowledgeable*** of ***hazards*** to ***protect*** against ***avoidable*** injury, illness, death, and destruction of property.”

Wow, that's a mouthful! But, look at those key words. We want to be aware and knowledgeable! We want to be prepared. Maybe it's training. Maybe it's more experience and knowledge about dangerous situations, or what can soon develop into a dangerous situation. Those dangerous or potentially dangerous situations are called “hazards.” Why do we want to be aware and knowledgeable? So we can PROTECT ourselves and others from accidents that can be AVOIDED if we only pay attention, heed warnings, get better training. Now we can limit the needless accidents that result in injury, illness, death, and destruction to property.

Serious costs to accidents

You know there are serious costs to accidents. Those costs can be measured three basic ways: *economic, physical, and psychological costs!*

Economic costs

Economic costs are easy enough to understand. There is a financial cost for all the lost work time, the medical costs, and the cost to replace damaged equipment. The increase in insurance premiums that may result from the payouts to injured workers and reimbursed employers for damages and loss of production time by insurance companies is measured by billions of dollars each year. Insurance company liability payments has become a major issue in the workplace. From medical malpractice to 9-11-01, the impact of economic losses is staggering.

Physical costs

But, as staggering as these economic losses can be, we must always realize that they reflect actual “*physical losses.*” There may be real injury to people and damage to actual structures and equipment that will need to be restored or replaced. If you are a person suffering from an actual physical loss, broken bones, occupational disease like miners’ black lung, or any other long term disabling injury, this can be very painful as well as draining financially.

Psychological costs

Then we come to the third type of loss. It goes beyond the economic and may even remain after the physical loss may be corrected or restored. That is the *psychological loss!* The anxiety, fears, frustration, and stress of the disabling injury to the injured person and their family. Some people just are never the same. Marriages may even break apart over the stress of a disabling injury. What is a human life actually worth? Ask many of the families who lost loved ones in the Twin Towers and they will tell you no amount of insurance money will ever replace a loved one. They would gladly give everything back for the routine relationships they enjoyed before 9-11. So, in summary, we must see that it is important to take a stand on accident prevention to limit these losses as much as we can. When we begin to see how accidents can happen, we can begin to see how accidents can also be prevented in many cases.

Who is responsible for safety?

How would you answer this question. “Who is responsible for safety?” Is it you? Is it your employer? Is it our citizens? Is it our government? The answer is YES to ALL of the above -WHO IS RESPONSIBLE FOR SAFETY? -- EVERYONE! Employers, workers, citizens and the government must all work together to make our workplace a safer place to be. Employers must see safety not just as a costly

issue because of government regulations, but one that protects their investment and their workers. Workers must see their responsibility to abide by employer safety regulations and contribute to a safe work environment by the safe work attitudes they project on the job. Government must exercise its constitutional role to protect its citizens by regulating the health and safety of the workplace. And, finally, citizens must use their political freedom to demand that such protection is in place.

Why do accidents happen?

Now, let's take a look at why accidents happen. All accidents can be divided into two main categories: Those that are caused by some environmental hazards and those that are caused by human error.

Environmental hazards

Environmental hazards are the cause of about 20% of all accidents. Examples of environmental hazards are:

- **Dangerous Equipment and Machinery**
 - ✓ *Heavy equipment*
 - ✓ *Explosives*
 - ✓ *Machinery*

- **Dangerous Substances**
 - ✓ *Toxic substances*
 - ✓ *Caustic substances*
 - ✓ *Radioactive substances*
 - ✓ *Carcinogenic agents* (cancer causing substances)

- **Natural Phenomenon**
 - ✓ *Snow & ice*
 - ✓ *Hurricanes*
 - ✓ *Tornados*
 - ✓ *Wind and rain*

- **Physical Hazards**
 - ✓ *Sitting*
 - ✓ *Standing*
 - ✓ *Reaching*
 - ✓ *Lifting*
 - ✓ *Typing*

Human Error

But, what of the other (80%) causes of accidents. That is where **Human Error** comes in. Human error can happen when people act irresponsibly. There are four major types of human error. They are:

- **Lack of Knowledge:** This can cause accidents because the worker may not know enough information about a machine or material they work with. If no one tells them exposure to a certain cleaning substance can cause cancer, they may not use the substance properly because they were never trained about its dangers and how to protect themselves.
- **Lack of Skill:** This cause of an accident can easily be demonstrated by looking at you when you began to drive. You might have all the BOOK knowledge of how to drive a car, but you lack the experience. That is why you needed so many training hours with an adult on your permit before you were allowed to get your license. How safe would you feel if you found out your airplane pilot knew everything there was about a plane. He actually practiced everything several times. Everything but landing. Oh, he did read the manuals. How safe would you feel?
- **Physical Limitations:** These could easily cause an accident if you are not strong enough to perform a certain job. Some machine, heavy equipment and construction related jobs require a good deal of **physical strength**. You can cause an accident if you are not physically prepared for your job. A classic example would be a stunt man. A stunt man out of shape is an accident waiting to happen, right? Another physical limitation is **fatigue**. We might not be getting enough rest or sleep. Now we are less alert and responsive at work. All this could easily cause an accident, especially when operating machinery around other workers. Finally **drugs** could cause a physical limitation. Whether alcohol, street drugs, or legal medications, any of these may impair your judgment on the job.
- **Poor Safety Attitudes:** Examples of these are the following:
 - ✓ **Undisciplined Attitude:** You have no set pattern of following rules or how you approach your work. You have not established good habits. You really don't want to invest any time to improve.
 - ✓ **Disobedient Attitude:** You know better than anyone else. You really don't want to listen to any one else's way to do something. To you, rules were made to be broken.
 - ✓ **Overconfident Attitude:** You know a lot about your job and the equipment. Other people get injured, not you. You are young and invincible. You are an expert.

- ✓ **Impatient Attitude:** You really don't have time for the delays that safety causes at times. It would be a lot faster today if you did the job without taking the time to put all the safety precautions in place. "I really don't have time to sit here and hook this safety belt up."
- ✓ **Careless Attitude:** You just don't pay attention. You never take time to be alert. You blow off safety precaution, not because you're against the rules, but you just don't think about it much.
- ✓ **Emotional Attitude:** You are very angry. You are very upset about something. Maybe you are very sad. Or, maybe you are so excited and happy about something to the point you are not concentrating on your work.

MODULE 5A: STUDENT ACTIVITIES

TO THE STUDENT: After reading and studying the information sheet, complete the following activities.

Activity 1: Select the BEST answer!

- ___ 1. This is always important when dealing with chemicals or machinery at work.
 - a. Wear protective clothing
 - b. Use safety goggles
 - c. Wear safety glasses
 - d. All of the above

- ___ 2. When you are cleaning or repairing power equipment or machinery, you should:
 - a. always keep the machine running to better diagnose problems
 - b. always wear gloves, especially when parts are moving
 - c. disconnect the power source
 - d. none of the above

- ___ 3. When you unplug something, you should”
 - a. pull on the cord
 - b. grasp at the plug
 - c. none of the above

- ___ 4. When working around machinery, you should”
 - a. wear lose clothing
 - b. wear a lot of jewelry
 - c. have long, dangling hair
 - d. none of the above

- ___ 5. When moving heavy objects, always:
 - a. check your pathway first
 - b. check the weight of the object
 - c. determine where you are going to take the object
 - d. determine how you will move the object
 - e. all of the above

- ___ 6. When lifting heavy objects, you should NEVER:
 - a. seek help from another person
 - b. use a lifting devices
 - c. carry up and down a ladder
 - d. test the weight of the object

- ___ 7. Bending at the waist to tie your shoes can put additional stress on your back.
- True
 - False
- ___ 8. When carrying an unbalanced load, carry the light end closest to your body.
- true
 - false
- ___ 9. Excessive weight puts continuous, additional stress on the back with every movement.
- true
 - false
- ___ 10. If a load is exceptionally heavy, you should:
- rock backwards when lifting
 - jerk upwards quickly
 - lift one side, then the other
 - seek help or get a lifting device
- ___ 11. The following tool is very dangerous to use when opening cardboard boxes:
- Stanley knife
 - box cutter
 - double edge razor blade
- ___ 12. When lifting a heavy object, you should:
- test the weight first
 - have secure footing
 - squat with the knees in front, slightly apart
 - keep back straight, arms extended
 - lift with the LEGS
 - all of the above
- ___ 13. Most accidents occur at:
- work
 - while recreating
 - at home
 - while a passenger in a motor vehicle
- ___ 14. Safety is the responsibility of:
- the employer
 - the worker
 - the government
 - citizens in the community
 - all of the above

- ___ 15. Practicing safety is to be “aware and knowledgeable” of hazards to prevent an accident that could result in:
- a. injury or death
 - b. illness
 - c. destruction of property
 - d. all of the above

Activity 2: Fill in the blank after each body part with the suggested way to protect it.

- 16. Head _____
- 17. Face _____
- 18. Eyes _____
- 19. Hands _____
- 20. Feet/Toes _____
- 21. Lungs _____
- 22. Back _____
- 23. Ears/Hearing _____
- 24. Hair _____
- 25. Skin _____

Activity 3: True or False

- ___ 26. In the “lockout procedure,” anyone can unlock the power source or your machine and start it while you are working on it.
- ___ 27. Employers have ALWAYS had the safety of their workers as a HIGH priority.
- ___ 28. Homicide at work IS NOT a safety issue and of little concern throughout business and industry.
- ___ 29. Sometimes, the positive drive for safety at work and a clean safety record with \$\$ bonuses can lead to the negative result of unreported and unrecorded accidents.

MODULE 5A: STANDARDS ADDRESSED IN THIS MODULE

Pennsylvania’s Academic Standards for Career Education and Work**13.2.11. Career Acquisition (Getting a Job)**

- E. Demonstrate, in the career acquisition process, the application of essential workplace skills/knowledge, such as, but not limited to:
- Commitment
 - Communication
 - Dependability
 - Health/safety
 - Laws and regulations (i.e. Child Labor Law, Fair Labor Standards Act, OSHA, Material Safety Data Sheets)
 - Personal initiative
 - Scheduling/time management
 - Team building
 - Technical literacy
 - Technology

Pennsylvania’s Academic Standards for Reading, Writing, Speaking and Listening (RWSL)**1.1.11. Learning to Read Independently**

- E. Establish a reading vocabulary by identifying and correctly using new words acquired through the study of their relationships to other words. Use a dictionary or related reference.

1.5.11. Quality of Writing

- E. Edit writing using the conventions of language.
- Spell all words correctly.
 - Use capital letters correctly.
 - Punctuate correctly (periods, exclamation points, question marks, commas, quotation marks, apostrophes, colons, semicolons, parentheses, hyphens, brackets, ellipses).
 - Use nouns, pronouns, verbs, adjectives, adverbs, conjunctions, prepositions and interjections properly.
 - Use complete sentences (simple, compound, complex, declarative, interrogative, exclamatory and imperative).