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ABSTRACT

This resource guide was developed in response to the Occupational Safety and Health Act of 1970 and is intended to assist teachers in implementing courses in occupational safety and health as part of a career education program. The material is a synthesis of films, programed instruction, slides and narration, case studies, safety pamphlets, courses, and books that are available from various governmental agencies, nonprofit agencies, educational materials distributors, and businesses. Major topics for a course outline are: (1) Pre-employment and New Employee Training, (2) Working Environment, (3) Electrical Hazards, (4) Safe Use of Personal and Industrial Equipment, (5) Hand and Power Tool Guarding, (6) Ladders, Scaffolds, Platforms, and Rigging, (7) Heavy Equipment Hazards, (8) Flammable Hazards, (9) Shoring, Blasting, and Traffic Control, (10) Marine Operations, (11) Special Hazards of the Building Trades, and (12) Everyday Safety. In addition, the manual includes suggestions for organization of a health and safety program, the role of the health and safety teacher, and guidelines for establishing and charts illustrating a school health and safety program. (SB)

THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF EDUCATION

OCCUPATIONAL SAFETY AND HEALTH PROGRAMS IN CAREER EDUCATION

DIVISION OF OCCUPATIONAL EDUCATION

APRIL 1973

"Even though a certain amount of protection is derived from our child labor laws, it is more important to undertake activities which will serve to prevent injuries. The Occupational Safety and Health Act of 1970 serves as a primary safeguard . . . highlighting our mutual concern for the safety and well-being of our students who are using community resources for educational purposes will be one of the more important outcomes of this conference."

Dr. Robert M. Worthington
"1973 National Conference on
Cooperative Education"
U.S. Office of Education
Washington, D.C.

OCCUPATIONAL SAFETY AND HEALTH PROGRAMS IN CAREER EDUCATION

By

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DIVISION OF
OCCUPATIONAL EDUCATION

Dear Educator:

According to U.S. Department of Labor Statistics, more than 14,000 Americans were killed on the job last year. Several million workers received injuries causing disabilities and hundreds of thousands of illnesses were occupationally-related.

The Williams-Steiger Occupational Safety and Health Act of 1970 (O.S.H.A.), P.L. 91-596, was enacted and is designed "to assure so far as possible every working man and women in the nation safe and healthful working conditions and to preserve our human resources."

This booklet is designed to assist educators in the implementation of courses in Occupational Safety and Health. Starting with the teacher the course can be offered to students, adults, business, labor and industry.

Sincerely,

Charles H. Buzzell

Charles H. Buzzell
Associate Commissioner
Division of Occupational Education

O.S.H.A. IN CARLER LDUCATION

By ROBERT DICARLO and JOHN MORINE

THE EMPLOYEL

The Occupational Safety and Health Act of 1970 requires that safety training be provided to employees by certain employers. No specific reference is made to the fact that students receiving career education be required to receive safety instruction. However, under the respective state plans submitted to the United States Department of Labor, Occupational Safety and Health Administration, individual states must include public agencies of the state and its political subdivisions.

Since the schools are considered political subdivisions, they will be required to comply with the O.S.H.A. standards. This means that the professional and non-professional staff members must be provided with safety training under the law.

WHAT ABOUT THE STUDENTS?

It appears that the students do not come under the law since they are not classified as employees. However, they are developing specific skills, attitudes and knowledge that relate to the world-of-work as part of their career education. Why not develop in learners the types of safety training that is required for entrance into the world of work?

WHERE TO START

Starting with the Occupational Safety and Health Coordinator, the students should be provided with a safety program in their respective occupational learning clusters. The learning activities should be concerned with general safety principles that apply to every student in the school. Intensive safety learning tasks can be an intergral part of specific programs in manufacturing, marketing, proces ng, science, construction, automotive repair, trades and other industrial subjects.

COOPERATIVE EDUCATION STUDENTS

Perhaps the students that are provided with the safety instruction that will be applied at the earliest date are the student-learners who are utilizing the community resources as part of the cooperative education program. Since they would be in a situation that classifies them as employees, they must be provided with the safety instruction, if they are within O.S.H.A. jurisdiction.

If the school provides the instruction in safety that is required by federal law, it would mean that students are going to be of more value to the employing training-sponsor. Also, the student would gain an added amount of practical on-the-job experience in a respective occupation. From both viewpoints, both parties gain if the school provides safety instruction to students.

Under the provision of the Fair Labor Standards Act, student-learners are provided with safety instruction if they are in a hazardous occupation. The same concept of providing safety training should apply to all cooperative education students, even if they are not in hazardous occupations.

AFFECTIVE EDUCATION

Since the role of the school is to provide appropriate behaviors to students in preparation for the world-of-work, the career educator must be aware that learning is developed in various domains. The cognitive and psychomotor domains are the most emphasized but it is the affective domain that has many implications with respect to safety training.

Students that observe unsafe physical conditions learn that such conditions are permissible to work with. If it happens in the school, then it must be permitted in industry, may be the thought of the learner. When unsafe acts are permitted to occur in the learning environment of the school, such acts are internalized in the learner. The learned may be conditioned to accept the fact that unsafe work places and acts are permissible. By the same token, safe conditions and safe acts are also internalized by the learners and the latter should be emphasized.

GUIDANCE AND COUNSELING

It is imperative that the guidance and counseling staff be aware of the need for the inclusion of an occupational safety and health program in all schools. Many opportunities will arise in which the counselors can stress this phase of the total program in their work with learners, especially in placement and follow-up.

Pilot Program

The enclosed course outline, researched, prepared and initiated by Manuel J. Rainha, Plumbing & Pipefitting Department Chairman and Occupational Safety and Health Coordinator, has been instituted at Northeast Metropolitan Regional Vocational School, Wakefield, Massachusetts.

Mr. Rainha was certified as an instructor of "Construction Safety and Health" by the U.S. Department of Labor, September, 1971, at Hartford, Connecticut. While undergoing certification, Mr. Rainha considered the sweeping impact that the Occupational Safety and Health Act would have on Career Education as it relates to the world-of-work.

Under employer responsibilities, O.S.H.A. specifies: "The employer shall instruct each employee in the recognition and avoidance of unsafe conditions and the regulations applicable to his work environment to control or eliminate any hazards or other exposure to illness or injury."

Section 5(b) of O.S.H.A. states: "Each employee shall comply with occupational safety and health standards and all rules, regulations and orders issued pursuant to this Act which are applicable to his own actions and conduct."

This Act, and the fact that at least seven workers are killed and approximately one thousand more become disabled each hour of every work day for a 240-day work year motivated Mr. Rainha to develop safety training for career education. Realizing that if the present job-related injury rate continues, three out of four high school graduates entering employment would experience a disabling injury during his working career, Mr. Rainha aimed a safety training program directly at the vocational high school student as part of his career education. To be effective, safety training must begin early and the learner must remain cognizant of safety practices, and career education was the natural place to train the future workforce in safety practices.

With the approval of the Northeast District School Committee, under an E.D.P.A. grant from John P. Morine, E.D.P.A. Project Director, Division Occupational Education, Massachusetts Department of Education, Mr. Rainha began research for the pilot program in 1971. Communication with private and non-profit safety agencies, suppliers of safety equipment, films and training courses, as well as the development of case studies on film slides, resulted in the enclosed course outline, to be utilized as a dissemination vehicle for other Massachusetts career educators.

Early in 1972, Mr. Robert DiCarlo, Chief of the Office of Cooperative Education for the Commonwealth of Massachusetts, invited Mr. Rainha to address a workshop of Cooperative Education coorinators regarding the impact of O.S.H.A. on industry and education. As a result of this talk, Mr. DiCarlo recognized the need for occupational safety and has since been instrumental for the implementation of occupational safety and health training throughout Massachusetts.

Summarizing the new trend toward occupational safety, Mr. Rainha notes: "The impact of O.S.H.A. on industry is dramatic. If we are to truly prepare career education students to take their places, safely, in the world-of-work, the responsibility of career educators is vital."

O.S.H.A. WORKSHOPS

The Pilot Program

After the pilot program had been conducted at Northeast Metropolitan Regional Vocational High School for the first year, a dissemination workshop was coordinated on March 31, 1972 by Mr. Robert DiCarlo, Chief, Office of Cooperative Education, Massachusetts Department of Education, through the combined efforts of the Massachusetts Department of Labor, Division of Industrial Safety and Northeast Metropolitan Regional Vocational High School. It was attended by representatives from vocational schools throughout the Commonwealth of Massachusetts.

The purpose of the workshop was:

1. To allow the Massachusetts Department of Labor to describe the status of O.S.H.A. as it was being implemented in Massachusetts in coordination with the Federal Occupational Safety and Health Administration.

2. To enable the Massachusetts Department of Education to present the proposed plans to bring O.S.H.A. certification programs to the vocational schools in Massachusetts utilizing data from the Northeast [illegible]politan Pilot Program, funded under E.P.D.A. P.L. 90-35 [illegible], as a model to follow.

3. To have the Project Director present results and evaluative data to other Massachusetts Vocational Educators for feedback and evaluation.

4. To inform LEA's of the Massachusetts Department of Education's role in O.S.H.A.

The participants of the workshop were provided with information relating to O.S.H.A. and how it applies to vocational schools. An agenda was set for the Fall of 1972 to continue with the workshops so as to have O.S.H.A. programs in more vocational schools in Massachusetts.

Planning

In the meantime, the Division of Occupational Education participated in O.S.H.A. workshops on June 8, 1972 with the Associated Industries of Massachusetts, October 3, 1972 with the Massachusetts Safety Council and conducted several meetings with the Massachusetts Department of Labor and the U.S. Department of Labor's Occupational Safety and Health Administration.

On October [illegible] the Division of Occupational [illegible] initiated an O.S.H.A. [illegible]op at Northeast Metropolitan Regional Vocational High School [illegible] of representatives from the Massachusetts Department of Education, Division of Occupational Education; Northeast Metropolitan Regional Vocational High School; Safety Equipment Business[illegible] of industrial trade presentations on O.S.H.A. as it effects them respectively.

The theme of the workshop was ''Safety Through Training'' and statics used in the workshop indicated that there are more frequent accidents in the age group 18-24 and safety instruction in vocational schools should be designed to include the O.S.H.A. certification program for students, as a means to decrease the frequency of accidents in the later mentioned age group.

Why Vocational-Education Schools

It is obvious that the Vocational-Education students are the population that should be provided with the O.S.H.A. certification program in addition to their on-going safety programs. The results of the pilot program in Massachusetts indicated that students become ''Safety Conscious'' and did develop abilities to identify general hazards in workplaces, machinery, and work habits. More specifically vocational education students in the project learned specific O.S.H.A. regulations under federal provisions of P.L. 91-596.

The Massachusetts Commitment

The commitment for O.S.H.A. had been made by the Massachusetts Department of Education and in November of 1972, Mr. Robert DiCarlo participated in the third pilot program of ''Voluntary Compliance'' [illegible] Department of Labor's O.S.H.A. Training Institute, Chicago, Illinois, the national headquarters for O.S.H.A. training.

Upon [illegible] the Massachusetts Department of Education proposal was [illegible] the O.S.H.A. Institute Training Staff, under the direction of [illegible] Weekend, Institute Manager, and it was decided to provide [illegible] O.S.H.A. Training Program to Massachusetts Vocational Educators.

The idea to interface the U.S. Department of Labor, the Massachusetts Department of Education and Massachusetts Local Educational Agencies in one goal was deemed worthy of pursuit. Since all the vocational Schools already have safety programs the O.S.H.A. certification process complemented the vocational-educational activities.

Under the plan the Massachusetts Department of Education, Division of Occupational Education acted as the coordinating agency to bring federal O.S.H.A. programs to local educational agencies and awarded participants a Massachusetts Department of Education certification entitled ''Occupational Safety and Health Coordinator.'' The participants also received the O.S.H.A. certification from the U.S. Department of Labor for permission to be a certification trainer.

GUIDE TO THE OCCUPATIONAL SAFETY AND HEALTH TRAINING COURSE

SOURCES

The following course outline is a synthesis of films, programmed instruction, slides and narration, case studies, safety pamphlets, courses and books that are available from various governmental agencies, non-profit agencies, educational materials distributors and businesses.

MATERIALS AND EQUIPMENT NEEDED

With the use of multi media that includes a slide projector, 16 m.m. sound projector, overhead projector, opaque projector and chalk board the materials can be utilized.

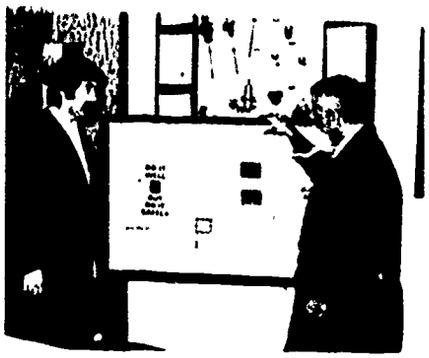
METHOD OF PRESENTATION

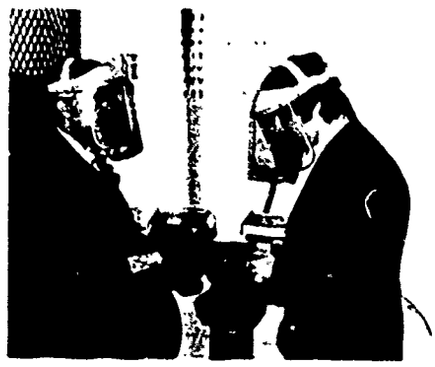
Since learning occurs in many ways and environments, the method of presentation can include large group instruction, small group instruction, group interaction and feedback, individualized instruction, programmed learning and lectures. The learner is the focal point of all learning activities and the director of learning (teacher) provides the appropriate method, materials and direction.

WHERE DOES THE COURSE BELONG?

The course can complement on-going safety programs in vocational schools and be included as part of the vocational learning activities. If so desired, it may be conducted as a separate course.

Although the course is basically structured around the 30-hour Occupational Safety and Health Course, developed by the U.S. Department of Labor, it does provide transferable skills, attitudes and knowledge that relate to many occupations. Therefore, it can be utilized in many of vocational educational programs.





Mr. Robert DiCarlo, Division of Occupational Education, Massachussetts Department of Education and Mr. Manuel J. Rainha, Occupational Safety and Health Coordinator dicusss safety procedures at Northeast Regional.

OCCUPATIONAL SAFETY AND HEALTH TRAINING PROGRAM

I. PRE-EMPLOYMENT AND NEW EMPLOYEE TRAINING

A. INTRODUCTION

1. Safety everyone's responsibility
2. Overview of the purpose of the Occupational Safety and Health Act of 1970 O.S.H.A., PL-91-596
3. Recognize, avoid and prevent (R.A.P.)
4. School safety rules and regulations

Suggested Time: 1 Hour

B. NEW EMPLOYEE'S SAFETY TRAINING (NEST)

A means of providing students/new employees with basic concepts of safety importance, safety goals, safety policy, safety rules, disciplinary action and injury causes by means of programmed instructional booklets.

(DuPont: AA500, $1.25 each)
Suggested Time: 1 Hour

C. THE SCRIBE (30 mins.)

The last film evermade by this genius of pantomime uses the inimitable Keaton comic style to drive home a serious message for construction safety and accident prevention.

(Associated Instructional Materials: KB-101, $324.50)
Suggested Time: 1 Hour

D. SAFETY PRINCIPLES: INTRODUCTORY UNIT I

A Programmed Instructional Booklet that provides information on safety principles, injury, prevention, safety performance charts, unsafe acts and injury reports.

(DuPont: AA551-1, $1.25 each)
Suggested Time: 3 Hours

E. PLANNING FOR SAFETY: INTRODUCTORY UNIT II

A Programmed Instructional Booklet that identifies steps in an organized approach to safety planning on the job. Each learner will demonstrate planning as it relates to getting ready for the job, doing the job and putting away when the job is finished.

(DuPont: AA553-1, $1.25 each)
Suggested Time: 3 Hours

F. THE UNPLANNED (20 minutes)

The film deals with the need for careful investigation of accidents and the story outlines an accident in the making, its happening and the resulting effects: a serious injury, property damage and loss of production.

The subsequent inquiry illustrates dramatically that injury causes are singular and usually have little relationship to accident causes, which are usually multiple and complex.

(National Film Board, $230.00)
Suggested Time: 1 Hour

II. WORKING ENVIRONMENT

A. ENVIRONMENTAL HEALTH AND SAFETY IN THE CONSTRUCTION INDUSTRIES COURSE 301

1. Planning, Layout, Organization
2. Heights, Holes Aisles and Runways
3. Work Space Control - Material Receipt, Storage, Supply and Handling

pp. 24-84
Suggested Time: 3 Hours

B. INDUSTRIAL HOUSEKEEPING

Reviews the housekeeping principles and viewpoints that lead employees to improve the cleanliness and orderliness of their work area and then to maintain this newly set standard of housekeeping; develops a checklist to assist learners in recognizing poor housekeeping in their work area. Materials are developed in programmed instructional booklets.

(DuPont: AA575, Price $1.25 each)
Suggested Time: 2 Hours

C. ENVIRONMENTAL HEALTH AND SAFETY IN THE CONSTRUCTION INDUSTRIES, COURSE 301

Housekeeping and work space control concepts are identified.

pp. 85-103
Suggested Time: 1 Hour

D. PORTABLE FIRE EXTINGUISHERS

A review of the nature of fire and fire extinguishment, including the concept of the "triangle of fire." The so called classes (A,B,C,D) of fires and their recognition.

(DuPont: AA559, Price $1.25 each)
Suggested Time: 3 Hours

E. ENVIRONMENTAL HEALTH AND SAFETY IN THE CONSTRUCTION INDUSTRIES. COURSE 301

This section identifies fire hazards, sources of ignition, natural chimneys, fire fighting equipment, supervisor's responsibility, personal services and first aid station.

pp. 104-126
Suggested Time: 1 Hour

III. ELECTRICAL HAZARDS

A. STATIC GROUNDING

A review of Static Electricity and the hazards involved in its generation, accumulation and discharge and basic rules to follow in Static Grounding of processing equipment.

Identification of faulty Grounding connections is also included in the Programmed Instructional Book.

(DuPont: AA565, Price $1.25 each)
Suggested Time: 1 Hour

B. DANGER ALIVE (18 minutes)

The film reminds us that we cannot take our dependence on electricity for granted and how much depends on an electrician's sense of responsibility for the safety and welfare of everyone around him. The electrician's contribution to construction is further enhanced by their working and living safely.

(Associated Instructional Materials: KB-10, Price $195.00)
Suggested Time: 1 Hour

C. LOCK AND TAG

A review of the safety principles involved in locking and tagging procedures.

All employees whose work involves either direct or indirect contact with any equipment that must be locked-out and tagged for safety reasons is programmed in learning modules.

(DuPont: AA555, Price $1.25 each)
Suggested Time: 1 Hour

D. ENVIRONMENTAL HEALTH AND SAFETY IN THE CONSTRUCTION INDUSTRIES. COURSE 301

Hazards in electrical power supply, low voltage, fuses and circuit breakers, and grounding are described.

pp. 127-144
Suggested Time: 1 Hour

IV. SAFE USE OF PERSONAL AND INDUSTRIAL EQUIPMENT

A. ENVIRONMENTAL HEALTH AND SAFETY IN THE CONSTRUCTION INDUSTRIES. COURSE 302

Introduction to tools and equipment. personal protection. ladders, scaffolds and rigging. Employer's responsibility and inspection of equipment and devices is explored.

pp. 1-2
Suggested Time: 1 Hour

B. SKILLED HANDS AND SURE FEET (16 minutes)

Scenes involving most trades in construction industry, shows candid shots of injuries to hands and feet when safety boots or safety gloves are not worn on the job.

(Associated Instructional Materials: KB-116, Price $195.00)
Suggested Time: 1 Hour

C. BASIC HAND SAFETY

This unit establishes the viewpoint that with due care all hand injuries can be prevented. In the unit the trainee recognizes the general causes of hand injuries and selects the best actions to take to avoid those injuries. Further, each trainee may be given the opportunity to review and analyze a job which he performs and identify the action he takes to avoid potential hand injuries.

(DuPont: AA569, Price $1.25)
Suggested Time: 2 Hours

D. ENVIRONMENTAL HEALTH AND SAFETY IN THE CONSTRUCTION INDUSTRIES, COURSE 302

Personal protective equipment and the proper use and condition is explained.

pp. 3-21
Suggested Time. 1 Hour

E. JUST ONCE (16 minutes)

Award Winner: "BRONZE PLAQUE," National Committee on Films for Safety
Many hazardous operations filmed to show why eye protection is vital. Workmen, foremen, superintendents made to realize the importance of sight-saving devices.

(Associated Instructional Materials: KB-115, Price $195.00)
Suggested Time: 1 Hour

F. PERSONAL PROTECTIVE EQUIPMENT

A review of the safety principles involved in the use of Personal Protective Equipment. An identification of the major types of this equipment and how they protect employees from injury.

Provides basic rules for all employees to follow in the selection, use, and care of their Personal Protective Equipment.

(DuPont: AA561-1, Price $1.25 each)
Suggested Time: 2 Hours

G. ENVIRONMENTAL HEALTH AND SAFETY IN THE CONSTRUCTION INDUSTRIES, COURSE 301

Introduction to the 30 hour Construction Safety and Health Course. A slide presentation with narrative and objectives stated in the instructor's course guide. pp. 1-19

Developed by: U.S. Department of Labor
Occupational Safety and Health Administration
Distributed by: National Audio Visual Center
General Service Administration (GSA)
Washington, D.C. 20409
Price: $75.00
Suggested Time: 1 Hour

H. SAFE AS HOUSES (22 minutes)

The need to encourage safe working habits and to maintain a safe construction environment is effectively described in the problems incurred by a home builder whose production schedule is delayed by accidents on the job. They result in injury to his men and loss of necessary manpower. The builder is successfully converted to the slogan "Keep Clean Work Areas."

(Associated Instructional Materials: KB-107, Price $195.00)
Suggested Time: 1 Hour

V. HAND AND POWER TOOL GUARDING

A. ACCIDENT CASE STUDIES: SAFETY TRAINING BY THE INCIDENT METHOD

This unit contains six case studies with pictures and a narrative description of a worker's unsafe work activities. Case No. 2 explores personal protective equipment and face injuries.

(National Safety Council: Kit No. 119.34)
Suggested Time: 1 Hour

B. IT DIDN'T HAVE TO HAPPEN (13 minutes)

How the careless or self-assured worker who scorns the use of guards and safety devices on woodworking machines endangers his own life, and lives of fellow workers.

(International Film Bureau: 21FB72, Price $95.00)
Suggested Time: 1 Hour

C. ENVIRONMENTAL HEALTH AND SAFETY IN THE CONSTRUCTION INDUSTRIES, COURSE 302

Manual and powered hand tools are analyzed with regard to damage, strength, danger and protective guards.

pp. 22-60
Suggested Time: 1 Hour

D. TOOL HAZARDS

Identify hazards involving the use of tools as presented in pictures, cartoons and work descriptions.

Select from the four Tool Checks the action that best shows how to avoid this type of hazard.

Apply the four Tool Checks to Tool Hazards, accidents or incidents involving tools that are found in his area.

(DuPont: AA573, Price $1.25 each)
Suggested Time: 1 Hour

E. SAFETY IN THE SHOP: POWER TOOLS (11 minutes)

Film stresses common sense practices in the use of woodworking and metalworking machines. Film shows the need for proper clothing, machine guards, making adjustments correctly, etc.

(Coronet Instructional Films: Price $140.00)
Suggested Time: 1 Hour

F. ACCIDENT CASE STUDIES: SAFETY TRAINING BY THE INCIDENT METHOD

Case study number six. Discusses basic concepts in handling of tools and associated hazards.

(National Safety Council)
Suggested Time: 1 Hour

VI. LADDERS, SCAFFOLDS, PLATFORMS AND RIGGING

A. ENVIRONMENTAL HEALTH AND SAFETY IN THE CONSTRUCTION INDUSTRIES, COURSE 302

Ladders, scaffolds, working platforms, egres, material handling and rigging is covered by learners.

pp. 61-124
Suggested Time: 2 Hours

B. ACCIDENT CASE STUDIES: SAFETY TRAINING BY THE INCIDENT METHOD

1. Case study number one explores an electrocution of an employee, who is using an electric drill with an extension cord on a steel platform with faulty grounding.
   (National Safety Council)
   Suggested Time: 1 Hour

2. Case study number 5 deals with jewelry hazards, proper tools and housekeeping.
   (National Safety Council)
   Suggested Time: 1 Hour

VII. HEAVY EQUIPMENT HAZARDS

A. ENVIRONMENTAL HEALTH AND SAFETY IN THE CONSTRUCTION INDUSTRIES, COURSE 303

Introduction to powered heavy equipment, mobile equipment, stationery equipment, reach, accessories and hazards associated with moving machinery, height, clearance and other problems.
pp. 1-2
Suggested Time: 1 Hour

B. THE TRAP (18 minutes)

A hard-hitting safety attitudes film that presents interviews with real accident victims whose lives have been needlessly shattered. Tells dangers around cranes and hoists, dip tanks, machinery, in-plant traffic. Tells need for protective equipment, guarding devices, neatness.
(Harvest A-V Inc., Price $100.00)
Suggested Time: 1 Hour

C. ENVIRONMENTAL HEALTH AND SAFETY IN THE CONSTRUCTION INDUSTRIES, COURSE 303

An in depth look at power equipment guarding, controls, hydraulic safety valves, electric ignitions and personnel transportation.
pp. 3-63
Suggested Time: 2 Hours

D. ACCIDENT CASE STUDIES: SAFETY TRAINING BY THE INCIDENT METHOD

Case number four (4) highlights job procedures, crane and overhead dangers and inspection.
(National Safety Council)
Suggested Time: 1 Hour

E. PINCH POINTS

The trainee recognizes general causes of Pinch Point Hazards; identifies specific hazards on his job ; works to avoid injuries by:

1. Following Safety Rules, Practices and Procedures
2. Operating equipment only when all guards are in place
3. Planning ahead to keep exposed parts of the body clear of the hazard
4. Letting others know what he is doing

(DuPont: AA563-1, Price $1.25)
Suggested Time: 1 Hour

F. ACCIDENT CASE STUDIES: SAFETY TRAINING BY THE INCIDENT METHOD

Case study No. 3 discusses poor lighting, isle marking, signs, driver shortcutting and picking up riders in vehicles.

(National Safety Council)
Suggested Time: 1 Hour

VIII. FLAMMABLE HAZARDS

A. ENVIRONMENTAL HEALTH AND SAFETY IN THE CONSTRUCTION INDUSTRIES, COURSE 303

Gas welding, cutting and arc welding is discussed.

pp. 64-109
Suggested Time: 2 Hours

B. INDUSTRIAL SAFETY DATA SHEETS

Data sheets No.'s 494 and 472 describe the safe use of oxygen and acetylene.

(National Safety Council)
Suggested Time: 2 Hours

C. FLAMMABLE LIQUID HAZARDS

A review of the hazards involved in the handling of flammable liquids.

Basic rules to follow to prevent fires and explosions of flammable liquids and vapors are developed with programmed instruction.

(DuPont: AA557-1, Price $1.25 each)
Suggested Time: 2 Hours

D. ENVIRONMENTAL HEALTH AND SAFETY IN THE CONSTRUCTION INDUSTRIES, COURSE 303

Flammable liquids, ignition, filling, storage, support, labeling, and grounding are analyzed.

pp. 110-127
Suggested Time: 2 Hours

IX. SHORING, BRACING AND TRAFFIC CONTROL

A. ENVIRONMENTAL HEALTH AND SAFETY IN THE CONSTRUCTION INDUSTRIES, COURSE 304

Excavation, trenching, storage and transportation.

pp. 1-16
Suggested Time: 1 Hour

B. TALKING ABOUT TRENCHING (10 minutes)

An unshored trench is a potential grave for the construction worker inside it. Unless the walls have been adequately shored up, there is nothing to prevent it from caving in and burying its occupants alive. In this film two unseen voices discuss the matter. As they talk (one in authority, the other a sceptic), the camera visualizes the theme of their arguments, examining trenches on actual job sites and showing the best and the worst possible working conditions.

(Associated Instructional Materials KB-104, Price $140.00)
Suggested Time: 1 Hour

C. ENVIRONMENTAL HEALTH AND SAFETY IN THE CONSTRUCTION INDUSTRIES, COURSE 304

Evacuation, trenching, traffic control, concrete construction and associate hazards are explored.

pp. 17-125
Suggested Time: 3 Hours

X. MARINE OPERATIONS

A. ENVIRONMENTAL HEALTH AND SAFETY IN THE CONSTRUCTION INDUSTRIES, COURSE 305

Introduction to marine operations, safety nets, steel erection, tunneling, confined spaces and demolition are discussed.

pp. 1-69
Suggested Time: 2 Hours

XI. BUILDING TRADES - SPECIAL HAZARDS

A. TANK ENTRY

1. A review of the safety principles involved in Tank Entry procedure.
2. Basic safety rules for employees to follow when performing work in tanks or other confined spaces.
3. A review of the major hazards encountered in tank work and the methods which must be used to prevent accidents and injuries to employees.
4. A Tank Entry Permit and its use as part of the procedure.

(DuPont: AA567 Price $1.25 each)
Suggested Time: 2 Hours

B. ENVIRONMENTAL HEALTH AND SAFETY IN THE CONSTRUCTION INDUSTRIES, COURSE 305

Special hazards in the building trades in roofing operations that relate to tar handling, insolation and personal protective equipment.

pp 70-92
Suggested Time: 1 Hour

XII. EVERYDAY SAFETY

A. Always on a Monday (15 minutes)

A film that depicts a safety conscious employee, on-the-job, who does not apply the basic safety concept off the job in his home environment.

(DuPont: AA526, Price $97.00)
Suggested Time: 1 Hour

B. ENVIRONMENTAL HEALTH AND SAFETY IN THE CONSTRUCTION INDUSTRIES, COURSE 305

Summary of the course.

pp 88-92
Suggested Time: 1 Hour

INSTRUCTIONAL RESOURCES AND MATERIALS

Association Instructional Materials
866 Third Avenue
New York N.Y. 10022

Coronet Instructional Films
43 Longwood Road
Weymouth, Mass 02188

E.I. DuPont DeNemours & Co., Inc.
Industrial Training Service
Room 7-50, Nemours Building
Wilmington, Deleware 19898

Harvest A-V Inc.
309 Fifth Avenue
New York, N.Y. 10016

International Film Bureau
332 S Michigan Avenue
Chicago Illinois 60604

National Audiovisual Center (GSA)
Washington, D.C. 20409

National Film Board of Canada
680 Fifth Avenue
New York, N.Y. 10019

National Safety Council
425 North Michigan Avenue
Chicago Illinois 60611

U.S Department of Labor
Occupational Safety and Health Administration
Washington D.C. 20210

SAFETY AND HEALTH PROGRAM ORGANIZATION

I. The administrator of the school can not delegate his leadership in safety and health, but he can turn over to the safety and health coordinato part of his responsibility.

II. The safety and health coordinator is a special assistant to the administrator of the school in safety and health matters. His success depends on the support he gets from the highest levels of administration. The safety and health coordinator should not give orders to supervisors or others except those directly under him, rather his function is to advise, assist, stimulate, and educate.

III. The department head represents the second level of supervision who is responsible to carry out the safety and health program.

IV. The instructor represents the key people who must implement the safety and health program.

V. Business, industry, and labor are advisors who keep the organization informed as to the safety and health needs required by them from respective states.

VI. The student safety council representative will create understanding between themselves and student body.

VII The student safety council representative will allow active and creative student participation in the organization

VII. The ultimate objective is to insure a safe and healthful workplace and provide safety training for all persons associated with the school.

OCCUPATIONAL SAFETY AND HEALTH COORDINATOR'S ROLE

The intent and purpose of OSHA is to provide every working man and woman a safe and healthful working environment. The implementation of a systemized means of accident prevention should be coordinated in schools by the occupational safety and health coordinator whose duties will be as follows:

I. Establish a school safety committee composed of administrators, teachers, students, business and industry.

II. Establish a student safety council composed of students from various grade levels.

III. Conduct a safety program consisting of inspection of the physical facility and use of posters and accident investigation.

IV. To provide safety instruction for students, professional (administrators, teachers.etc.) and nonprofessional (clerical, maintenance, etc.) staff.

GUIDELINES FOR ESTABLISHING A SCHOOL SAFETY AND HEALTH PROGRAM

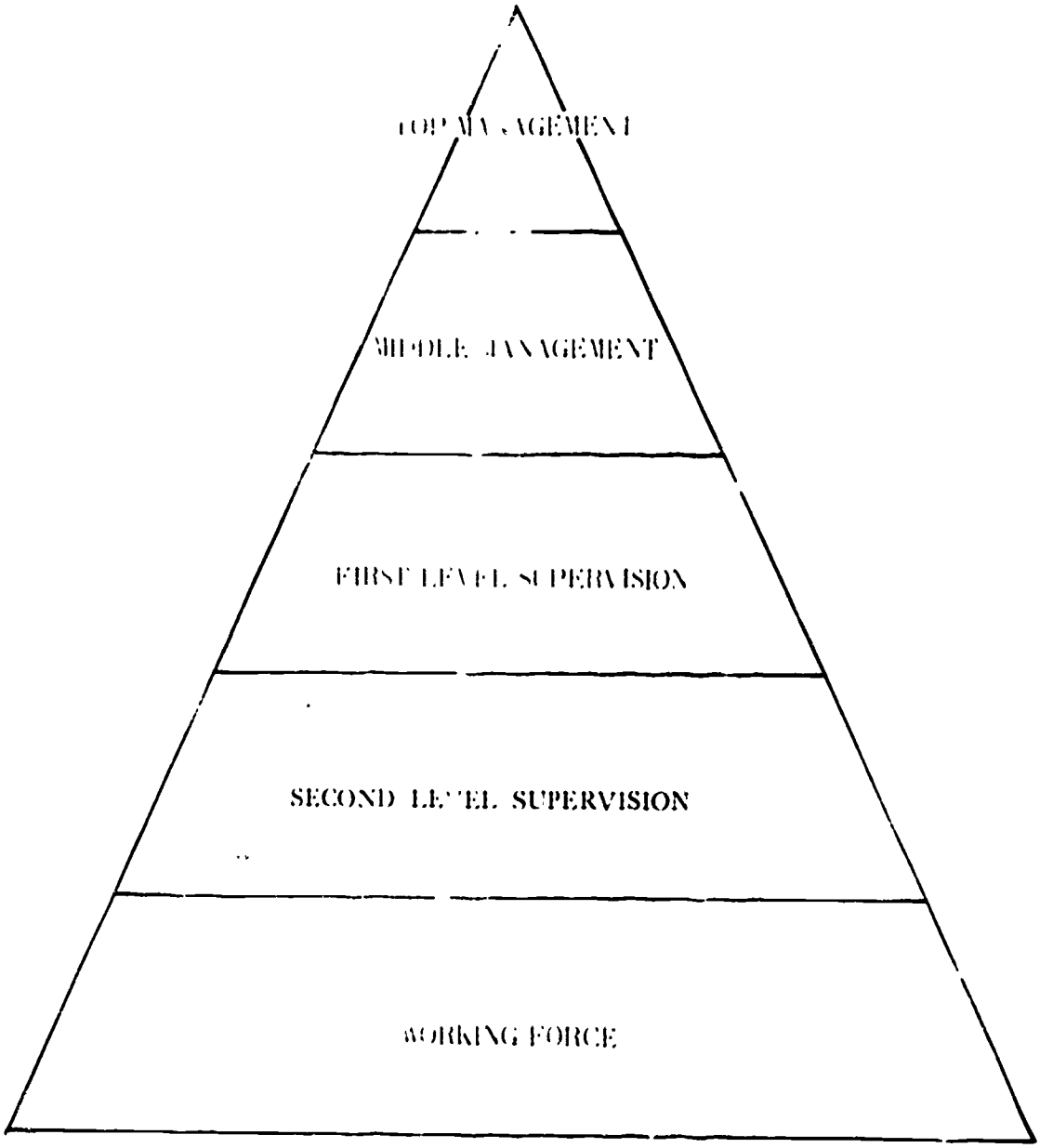
A successful program depends on three essentials:

I. Leadership by administration: The administration must set the school's safety policies, stimulate safety awareness in others and show good faith if others are to cooperate in making conditions safe and healthful.

II. Safe and healthful working conditions: It is the responsibility of the Department Head. He must assume leadership for his own department and is responsible to carry out the occupational safety and health programs.

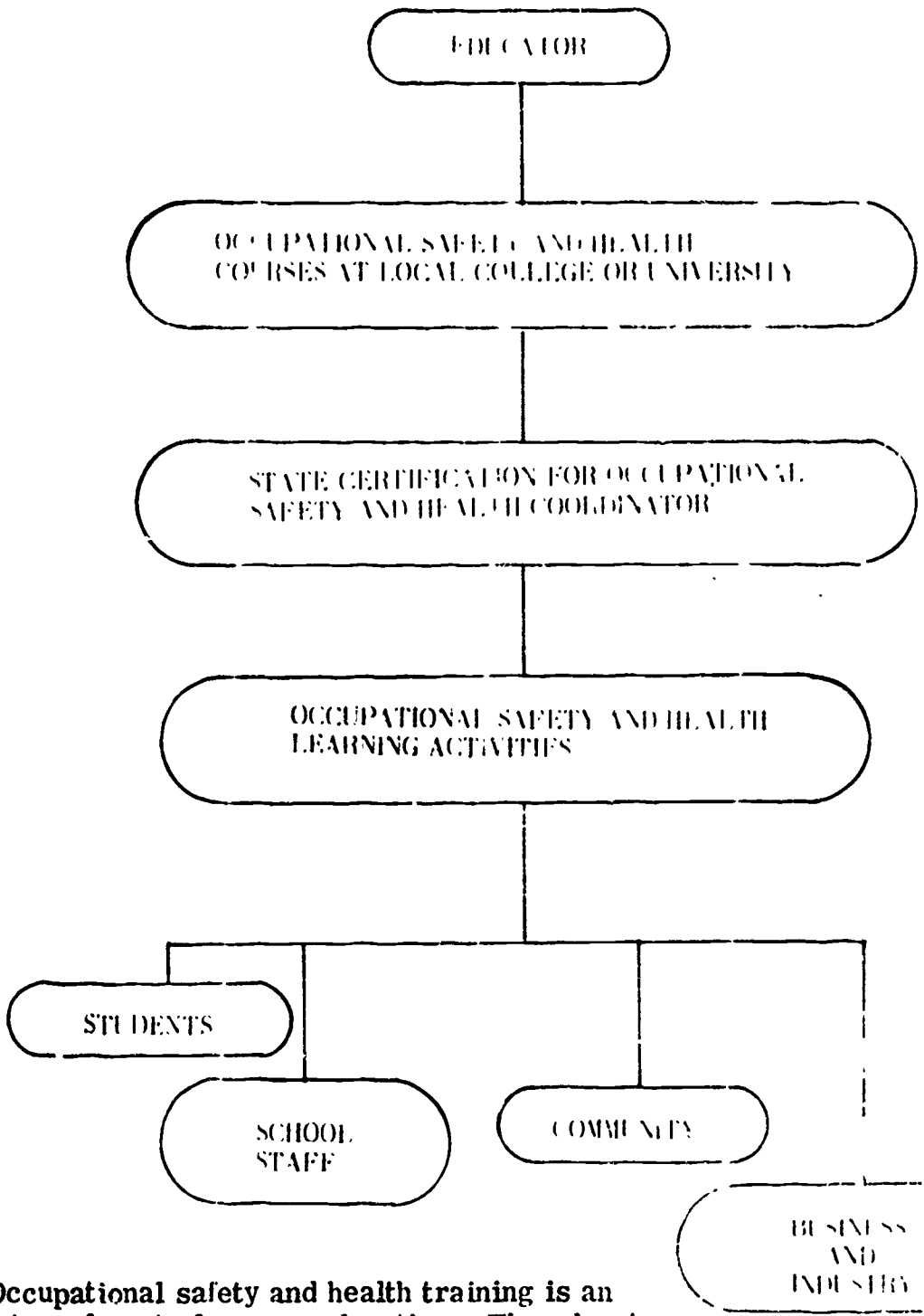
III. Implementation: The key link in the chain is the shop and related instructor. As one who deals most directly with the student, he bears great responsibility for implementing the safety and health program.

INDUSTRIAL SAFETY COMMITTEE



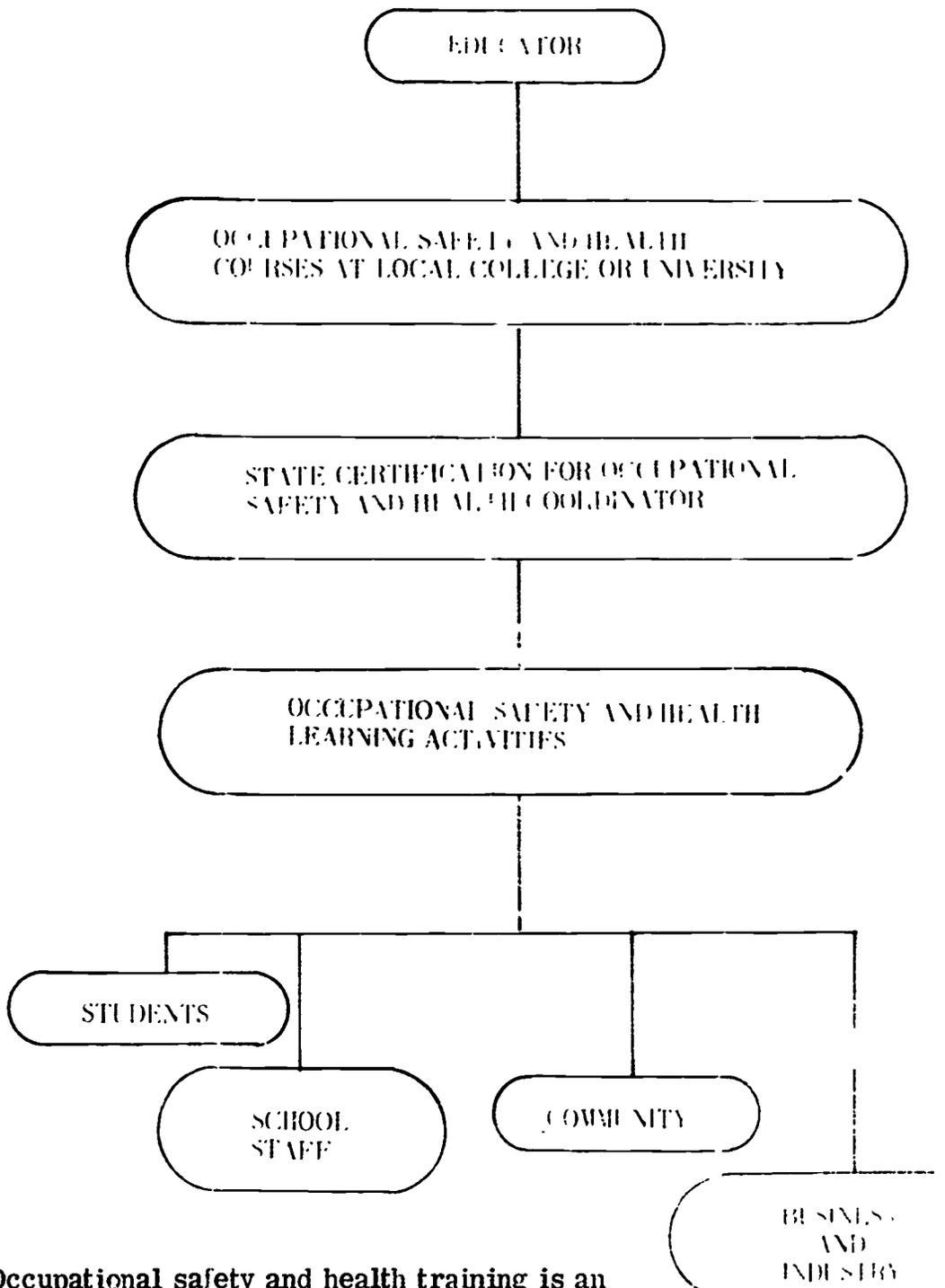
It is a truism that sound management principles relating to the "triangle of safety" results in a reduction in the loss of manpower, machinery, and and material.

OSHA IN THE EDUCATIONAL SYSTEM



Occupational safety and health training is an integral part of career education. The educator is provided with appropriate courses of study at the university level, receives respective state certification, provides occupational safety and health learning activities to students, school staff, the community, business and industry.

OSHA IN THE EDUCATIONAL SYSTEM



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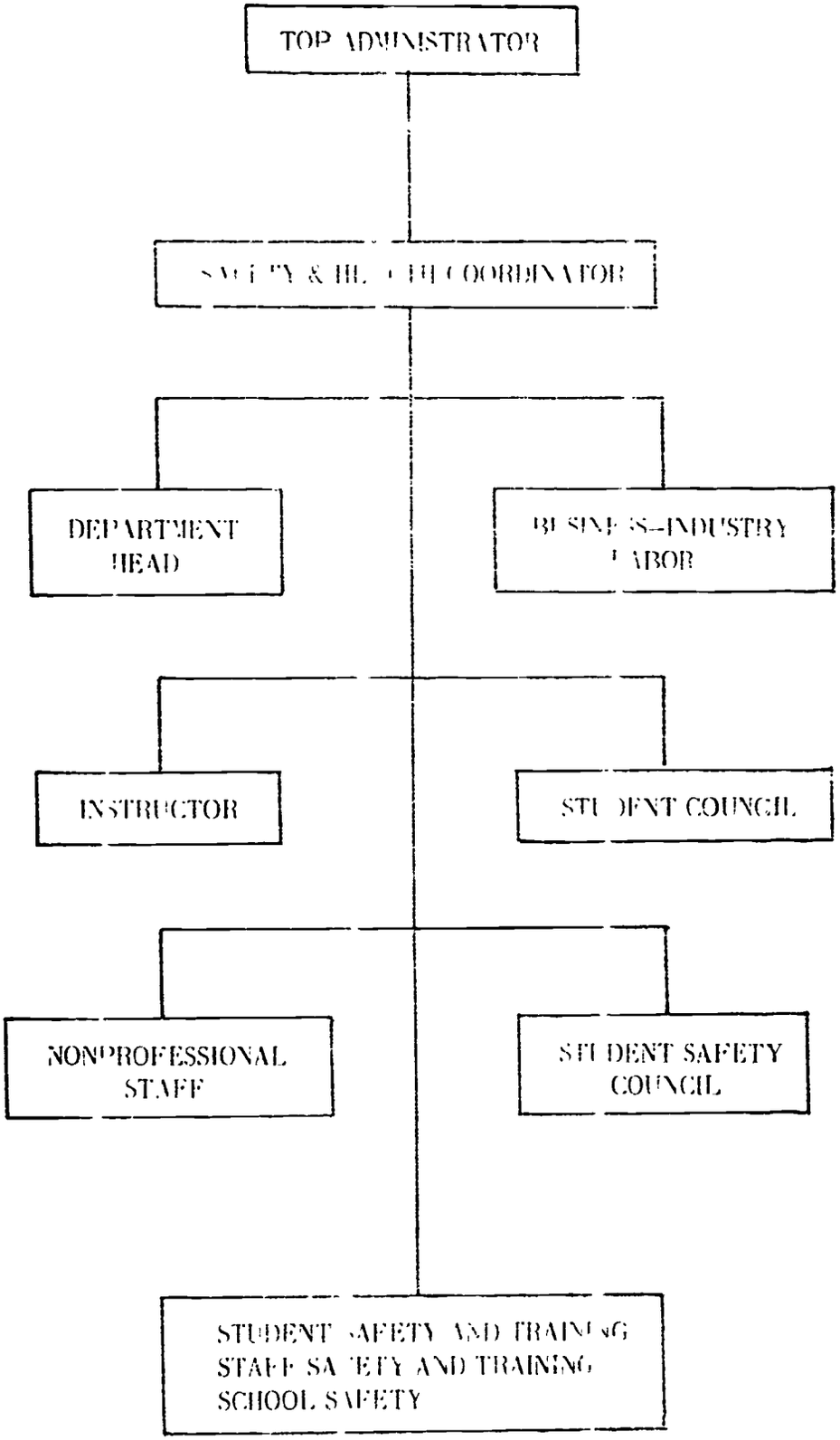
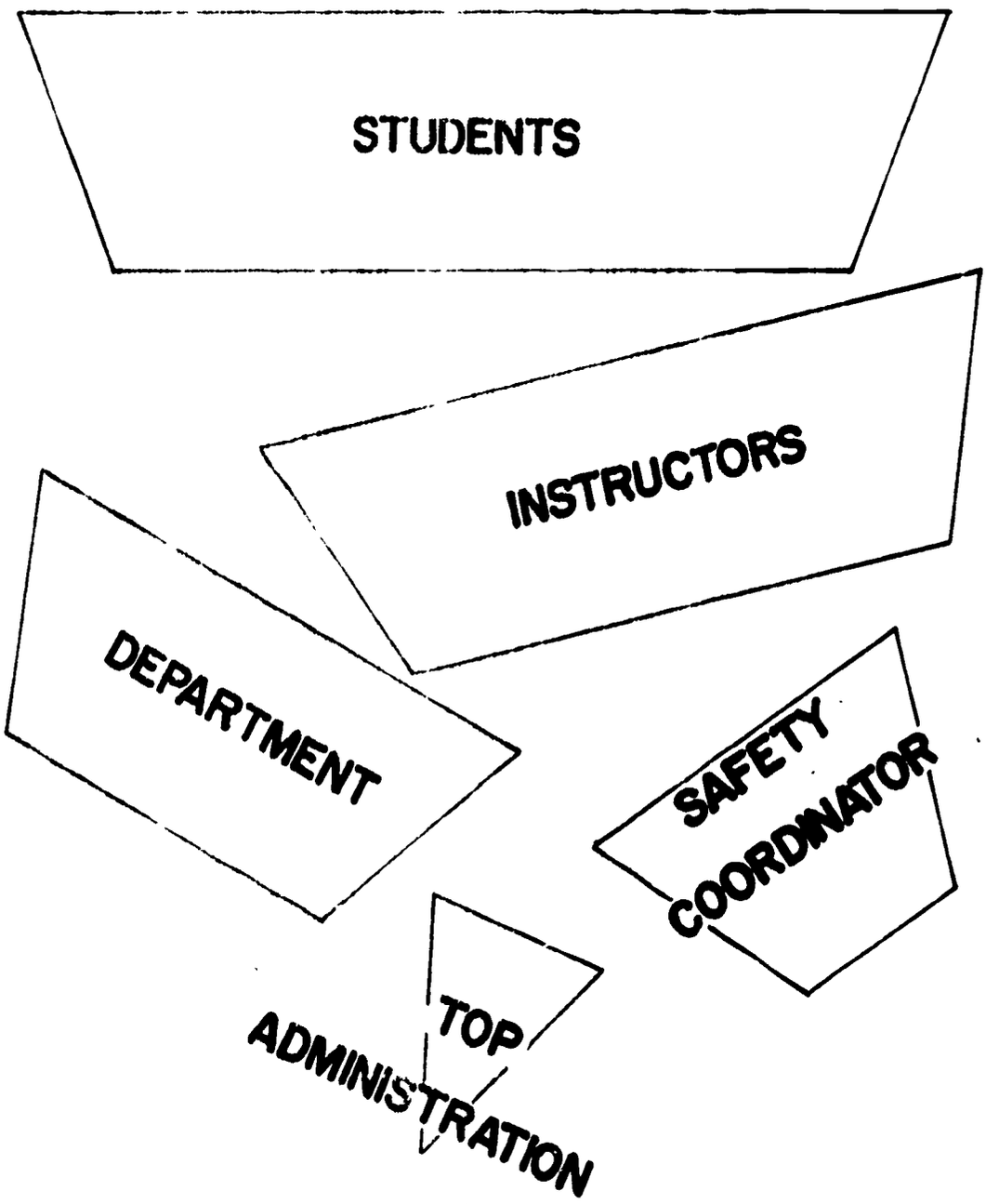
SCHOOL SAFETY COMMITTEE



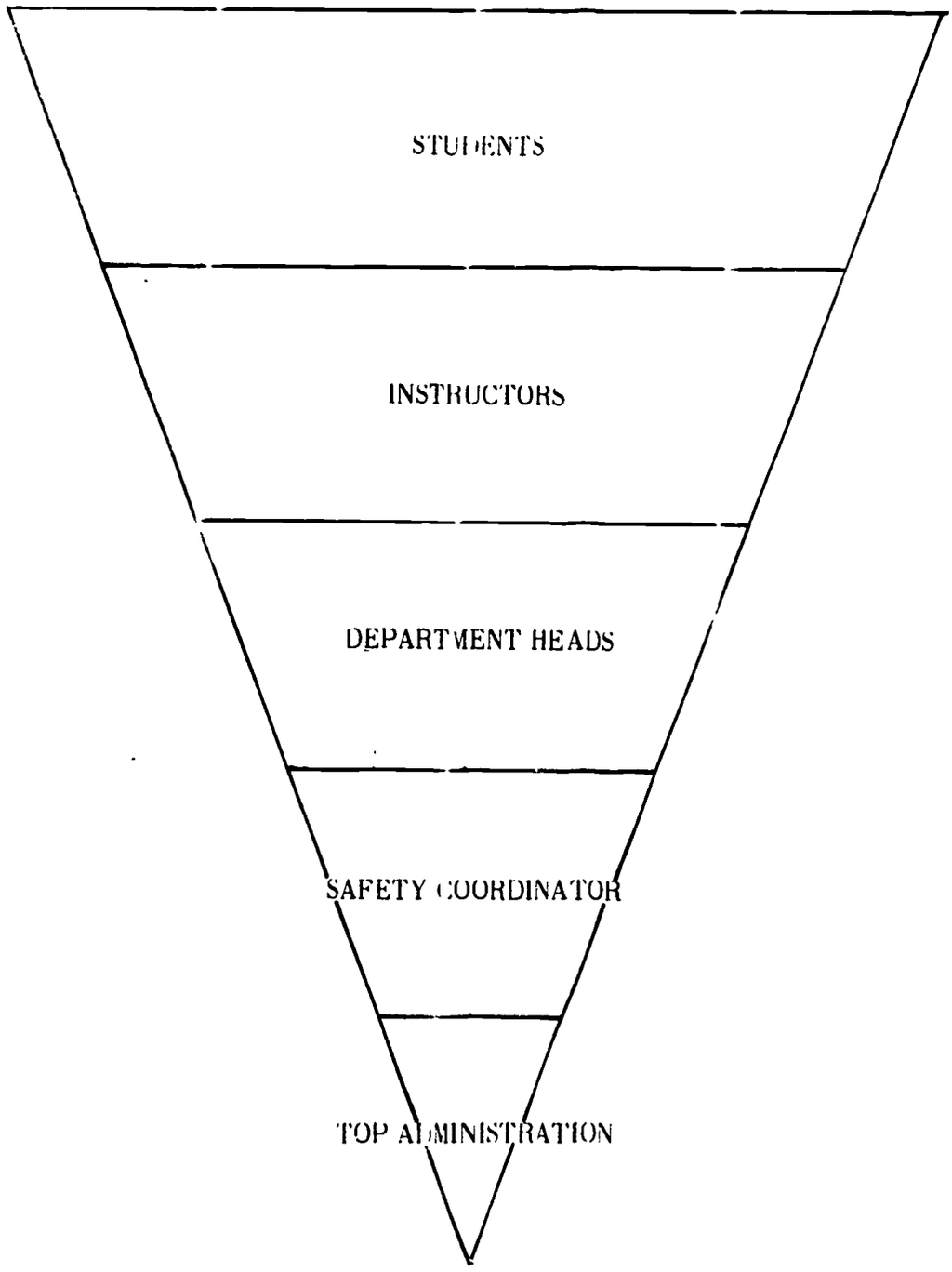
A typical school safety committee should have an organizational structure similar to the above.

A DYSFUNCTIONAL SCHOOL SAFETY COMMITTEE



What happens to the "triangle of safety" when no functional safety committee exists? Confusion, lack of coordination and chaos will occur when the lines of responsibility are not defined. A united interrelationship of various organizational components is the foundation of a viable safety program.

A FUNCTIONAL SCHOOL SAFETY COMMITTEE



The above chart shows how the top administration is the foundation of a solid and effective program of occupational safety and health. They provide decision making opportunities for subordinates to participate in the task of achieving a safe and healthful work place through safety training.

MAJOR PROVISIONS
of the
OCCUPATIONAL SAFETY AND HEALTH ACT
OF 1970

GENERAL — The Williams-Steiger Occupational Safety and Health Act of 1970, effective April 28, 1971, was created for the purpose of assuring, so far as it is possible, every working man and woman in the nation safe and healthful working conditions. The provisions of this law apply to every employer with one or more employees engaged in a business affecting Interstate Commerce. The Act authorizes the Secretary of Labor to promulgate as occupational safety and health standards any existing federal standards (such as Walsh-Healy safety standards) or any national consensus standards, and to promulgate other permanent standards at any time under the procedures of the Administration Procedures Act.

DUTIES OF THE EMPLOYER — Each employer has the duty to maintain employment conditions free of recognizable hazards causing or likely to cause death or serious physical harm. He also has to comply with all occupational safety and health standards, rules or regulations issued pursuant to the Act.

COMPLIANCE INSPECTIONS — Compliance Officers of the Department of Labor are authorized to enter without delay and at reasonable times any factory, plant, establishment, construction site, or other area where work is performed by an employee; to inspect the premises and all pertinent conditions, apparatus, devices, and material therein; to question privately any employer, agent, or employee; and to review records pertaining to occupational safety and health. No advance notice is given with regard to inspections unless authorized by the Area Director of OSHA, where such notice is reasonably necessary to enhance the effectiveness of the inspection. In no cases shall notice be given more than 24 hours in advance. One management representative and one representative of the employees are permitted to accompany Compliance Officers.

PENALTIES — Within a reasonable time following the conclusion of an inspection, the Area Director may issue a citation and a proposed penalty for each violation of any standard, rule, or regulation. In fixing the amount of the penalty(ies), due consideration is given to the size of the business, the gravity of the violation, the good faith of the employer, and the history of previous violations. Pursuant to Section 17 of the Act, the following civil penalties may be imposed.

A. For a serious violation, a penalty up to $1,000 WILL BE assessed.

B. For a violation specifically determined not to be of a serious nature, a penalty up to $1,000 MAY BE assessed.

C. For willful violation of any standard, rule, or order which ultimately causes the death of an employee, a fine up to $10,000 and/or imprisonment for up to 6 months shall be imposed upon conviction.

NOTE: It should be noted that the act does NOT provide for the levying of any penalties against employees for failure to comply with OSHA standards. The employer will be held responsible for employee compliance.