

# Refinement and Evolution of the Small Group Activity – problem solving using NIOSH fatality reports



The New England Consortium  
NIEHS funded since 1987

TNEC approach to training considers adult learners using small group activities and story telling.

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# Workshop Objectives

- Participants will know the different modes of learning.
- Participants will learn how small group activities can be refined for deeper analysis and student participation in health and safety training.
- Participants will critique an existing small-group activity and enhance it for more critical analysis and participation.

# The Seven Learning Styles

**Visual - (spatial):** You prefer using pictures, images, and spatial understanding.

**Aural - (auditory-musical):** You prefer using sound and music.

**Verbal - (linguistic):** You prefer using words, both in speech and writing.

**Physical - (kinesthetic):** You prefer using your body, hands and sense of touch.

# The Seven Learning Styles

**Logical - (mathematical):** You prefer using logic, reasoning and systems.

**Social - (interpersonal):** You prefer to learn in groups or with other people.

**Solitary - (intrapersonal):** You prefer to work alone and use self-study.

# The Hierarchy of Controls

Controlling exposures to occupational hazards is the fundamental method of protecting workers.

Traditionally, a hierarchy of controls has been used as a means of determining how to implement feasible and effective controls. The hierarchy addresses:

- **Elimination**
- **Substitution**
- **Engineering controls**
- **Administrative controls**
- **Personal protective equipment**

# Occupational Safety and Health Act

## General Duty clause

### **(a) Each employer --**

(1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;

(2) shall comply with occupational safety and health standards promulgated under this Act.

### **(b) 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.

# What is a job hazard analysis?

- A job hazard analysis is a technique that focuses on job tasks as a way to identify hazards before they occur.
- It focuses on the relationship between the worker, the task, the tools, and the work environment.
- Ideally, after you identify uncontrolled hazards, you will take steps to eliminate or reduce them to an acceptable risk level.

# **NIOSH Fatality Reports**

## **FATALITY ASSESSMENT AND CONTROL EVALUATION (FACE) PROGRAM**

- Each day, between 12 to 13 U.S. workers die as a result of a traumatic injury on the job.
- Investigations conducted through the FACE program allow the identification of factors that contribute to these fatal injuries.
- This information is used to develop comprehensive recommendations for preventing similar deaths.

# Read, Write, Report

Who	Recommendations
Laborer and Rescuer (Asphyxiation) 19.5 - 23.5% O <sub>2</sub>	<ul style="list-style-type: none"><li>- Test air in space</li><li>- CO</li><li>- Use respirator</li><li>- Ventilate space before entry</li><li>- Pre-plan for rescue</li><li>- Rescue Equip.</li></ul>
Laborer struck by caught in	<ul style="list-style-type: none"><li>- Awareness of trenching</li><li>→ Step/shoring (Engineering Control)</li><li>- PPE - hard hat</li><li>- Spoils pile location</li><li>- Plan</li><li>→ Hook tank to crane before cutting</li></ul>
Stabilize it Loose	

# Read, Draw, Write, Report

Man Stuck Head in  
Forklift Mast

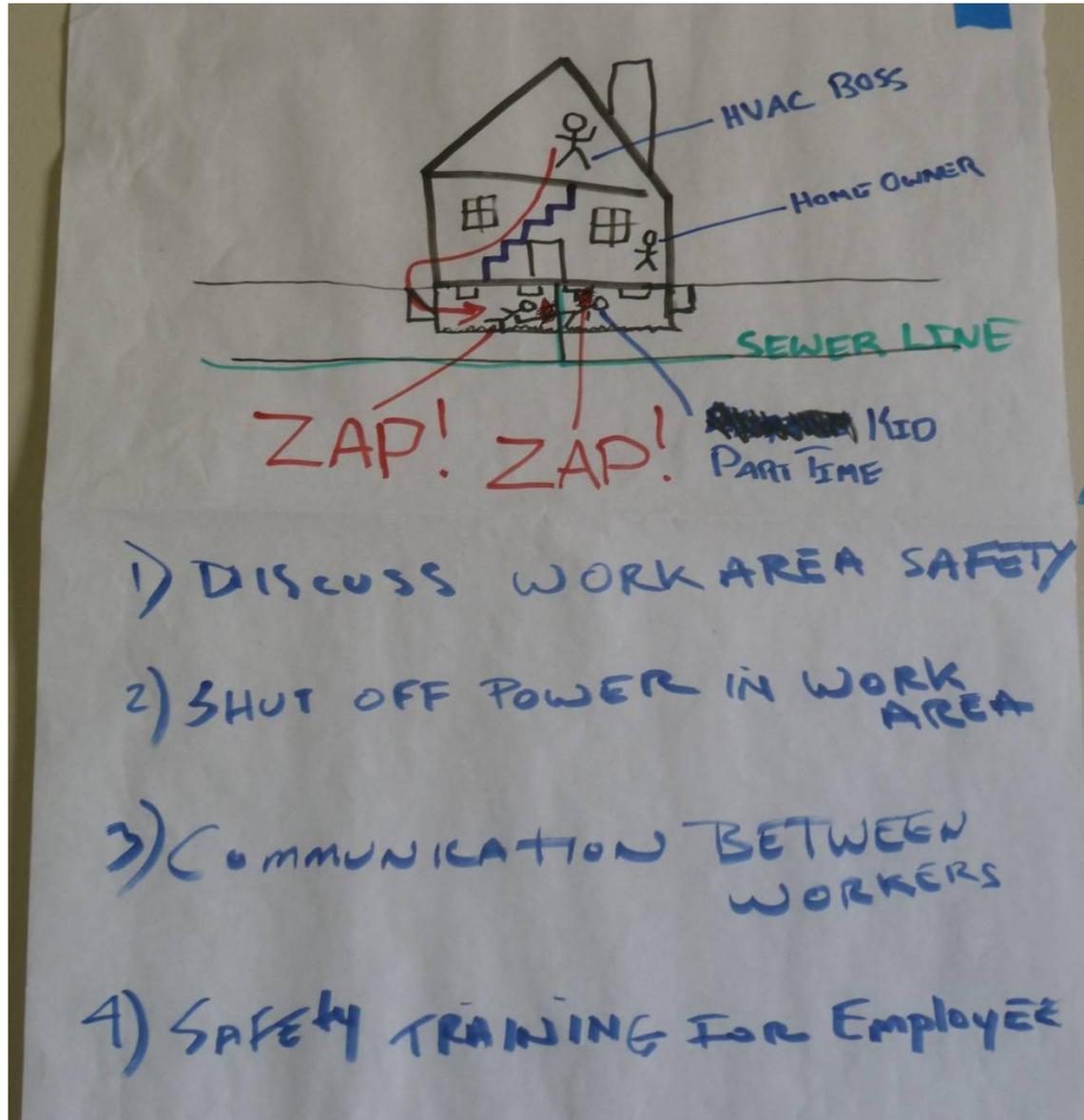
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Rec.

- Seat belt
- Speed
- Spotter



# Read, Draw, Write, Report



# Qualitative Observations

- Students make more critical, detailed recommendations.
- Student participation in small groups is more active and thoughtful.
- Entire class gives greater overall attention to each NIOSH FACE report.

# Conclusions

- The more modes of learning applied in training, the greater the opportunity for student participation in health and safety small-group activities.
- This results in overall deeper analysis of health and safety issues for the entire class.