

Safety Training Activities for Manufacturing

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Introduction

Safety professionals working in manufacturing environments know that training requirements for manufacturing employees are high. OSHA requires over 150 types of training across all industries. Approximately 50 of these topics are generally applicable to most manufacturing environments. Additionally, approximately 30 of these topics must be delivered annually.

One way to keep things interesting for trainees, as well as the safety trainer, is to use interactive learning activities instead of or in addition to traditional classroom training. The idea of using interactive activities comes from the guiding principles of accelerated learning and have been shown to be a highly effective way to get and keep trainees attention as well as to increase retention of the training material presented.

The principles of accelerated learning have been presented at previous ASSE Professional Development Conferences and described in the corresponding Proceedings papers. The titles of these papers are included in this paper's bibliography. To briefly summarize, the principles of accelerated learning are:

Total Learner Involvement Enhances Learning

Learning should involve the whole mind and body. Games and activities are a great way to get the trainees' mind and body involved for maximum participation.

Learning is not the passive storage of information but the active creation of knowledge

By working through an activity such as a game, the trainee is working to learn and make connections and not just being fed information. When this happens, the information is more meaningful and will be retained longer.

Collaboration among learners greatly enhances learning

Good learning is social and we can learn much more by learning with our peers than we can by ourselves. Safety training games and activities, for the most part, are group activities. Even when the activity is a simple safety crossword puzzle, teams can work on the puzzle together to increase learning.

Activity – centered learning events are often superior to presentation-centered ones

If you ask someone to sit still and just look at a bunch of slides or listen to a speaker, learning will not be as great as if the same material was presented along with an activity that would relate to the material at hand. Activity, or doing the work itself, enhances learning. Even when there is no replacement for a lecture format, trainees can stay active through guided note taking, frequent question and answer periods, and reviews.

It is important to point out that people will not automatically learn more because they are standing up and moving, but if you combine physical movement with intellectual activity and use all of the senses, this can have a profound effect on learning. Training activities and games can do just that.

Effective Training Activities

What makes a training activity effective? Safety training activities should incorporate a combination of chance and skill whenever possible. If too much chance is involved, the activity becomes nothing more than a game of chance - basically a waste of time and a mindless activity. Imagine tossing dice for twenty minutes straight just for the purpose of trying to get the highest number. That would be boring. If a safety training activity involves too much skill, it quickly becomes a quiz and although quizzes have their place in safety training, you do not want a safety training activity to turn into a test. You want to make sure you incorporate at least a little fun.

It is also important that the activity is easy to understand. Instructions should be shared before the activity starts and the trainer should be sure that everyone is clear on what to do before proceeding. If language or reading difficulties are an issue, only activities that allow all trainees to equally participate should be used in the class.

Why Fun?

If it is enjoyable, trainees will want to take part and will be more involved in the activity, which will result in greater learning. Activities that are fun will also keep their attention longer. Positive emotions are very important in enhancing learning. If someone is sitting endlessly in a lecture, they probably won't have positive emotions for very long. Activities can help with these positive emotions. If someone is stressed or bored or angry, their learning will be inhibited. If learning is positive, relaxed and engaging, learning will be increased.

The principles of accelerated learning are a perfect match for safety training. So much of safety training can be improved by having the trainees actively involved and accelerated learning principles strive to do just that.

If the training class you are delivering is a refresher, the majority of your audience will have some idea of what you are talking about already. This is a big advantage since you can often jump right into the learning activity. If you have been delivering the same topic to the same group of people for years, you have many options in front of you. Some of the most frequently delivered safety training topics includes Hazard Communication, Respiratory Protection and Lock-Out/Tag-Out. Most of the activities below can be used for these 3 topics and easily modified to fit any of them, as well as others.

Suggested Training Activities

Brain Dump – If your trainees report to training complaining that they already know everything and that the training is a waste of time, *Brain Dump* can work well. To have your trainees participate in the *Brain Dump*, you first divide the class into teams of 2-4. Give each team a piece of paper and tell them to number it 1-20. (For longer classes, you can have the teams number their pages 1-40 or 1-50). Tell the team they will have 5 minutes to write down as many key items or phrases they can think of that relate to the information that will be presented (and no word or phrase can be repeated). If they can think of more than 20 items, they should keep going. At the end of the allotted time, check to see which team has the most words or phrases and announce them the winner. Share the winning team's list with the class and use it to lead your review and discussion. Be sure to add in other important points to be covered that may not be included in the list

Write-On BINGO – *Write-On BINGO* works much like regular BINGO in that the winner must get 5 squares in a row or diagonally crossed off. With *Write-On BINGO*, instead of having a number and letter called, the trainee is free to select the squares they want but the key is that they must answer the question in that square correctly. To make the game more challenging, you can require the trainees to mark off two lines.

Safety Sequence - *Safety Sequence* is a good activity for training topics that include a series of steps or a safety procedure, such as lock out tag out or confined space entry. *Safety Sequence* can be a real learning tool. To organize the game, you will need to find a simple illustration or photo (one you take yourself is fine if the picture is clear and clearly shows the step) of each step of the procedure. For a simple lock out tag out exercise, the photos you might want to include would be 1) Determine the Hazards, 2) Notify Others, 3) Isolate Energy Sources, 4) Remove Potential Energy, 5) Verify Lock Out, 6) Perform Work, 7) Prepare to Start up again, 8) Remove locks and tags, 9) Test Equipment, and 10) Notify others when work is complete. Make copies of these photos or drawings so you can put one step on a small card and make several sets of cards (one set for each group of trainees). After the material has been presented, shuffle the cards and give a set to each group. Tell them they have 1 minute to get the cards in the proper order, with the first step of lock out first in the pile and the last step in the lock out tag out procedure should be last. After one minute has passed, tell the groups to stop and review the steps in the proper order. Ask each group if they have the same order or if they disagree. If the groups complain about having only one minute to do the exercise, begin a discussion about how difficult it can be to make important decisions when rushed and why it is very important to thoroughly understand critical safety procedures. An example of a Safety Sequence illustration set for lock-out/tag-out is provided in Appendix A.

Safety Sort – *Safety Sort* is one of the best activities for any type of training class so it can also be a very good addition to a refresher class. With *Safety Sort*, you list out a number of items or conditions on index cards before class. The number of items and number of cards will depend on the topic and how long you want to spend on the activity. With a refresher class, *Safety Sort* could be your kick-off activity and the discussion could lead into your review of the class material. For example, if you were providing a refresher class on Hazard Communication, you could make up a set of *Safety Sort* cards that contain different names of chemicals that are in your facility and then ask the teams to sort them by chemical type. For example, flammables in one pile, oxidizers in another and so on. (You will need to make a set of the cards for each team). After about 10 minutes, ask each team how many cards of each type they have in each pile. If these numbers are different, you have a great opportunity for discussion.

Store It – To play *Store It*, you will need index cards and envelopes or small file boxes. List out common chemical products that you use and store in your facility and place these on the ten cards. The envelopes or small file boxes represent different storage cabinets in your facility. Make a set of the cards for each team and provide them with several envelopes/file boxes. Tell all teams that it is their job to work together to place the correct chemical cards into the correct storage cabinets (envelopes/boxes). After all teams are finished, have each team review what chemicals they placed in each container (envelope/boxes).

Flashback - For a refresher class on confined spaces (although you could modify this activity to work with many topics) you can use the Confined Space Sketch (found by clicking the special CS link at www.HazardHunt.com). Put the trainees into teams and then give each team a copy of the Confined Space flashback drawing but put it face down in front of each group and tell them they cannot look at it until you tell them to. When you say go, they should turn over the picture and study it for 1 minute. After one minute, you should ask them to turn it back face down and then with their team, begin to create a list of all of the hazards they saw that relate to confined space entry. After about ten minutes, review each item on each team's list and discuss as a class.

Rapid Recall – *Rapid Recall* can easily be used as the focus of an entire refresher class. Before class, you will need to develop a "Recall Sheet" with questions that address all important pieces of information that are included in the class topic. You will also need to gather summary information and enough copies for several teams. To begin, you should put trainees into teams and provide each team with training topic summary materials. This could be as simple as a few pages of notes or the company policy or procedure on that topic. Depending on the complexity of the topic, you can give the teams 5 to 15 minutes of time to review the material. When time is up, give each team a chance to recall important information about the topic. Keep the time for this portion of the activity relatively short. They can talk amongst their teammates but they cannot look at the summary material you provided. After enough time has passed, usually about 5-10 minutes, ask each team to tell you how many of the questions they were able to answer. The team that says they have the most answers correct should be selected to start the review. Ask the team to read through each question they answered and to present their answer to the class. After each question is answered, ask if any of the other teams have anything to add. If all teams have responded and all of the pertinent information was not covered, use this time to provide the additional information that needs to be covered in this review class. Continue until all questions on the *Rapid Recall* sheet have been answered.

Debriefing

Finally, we need to say a word about debriefing. Debriefing is a term often used to describe the time when you help the trainees, through the asking of specific questions, to reflect upon an activity. After all is said and done, people are going to learn from the activity when they are able to reflect on the experience. When the trainees are wrapped up in the activity, they may be laughing or deep in a team discussion so they probably aren't thinking about what they are learning. Debriefing is the most important part of the exercise but unfortunately it is also usually the most overlooked. Many safety professionals have never even heard of the word.

Debriefing should encourage discussion. It is suggested that you have a list of questions developed that will help you to achieve the particular learning objectives for the class that you are delivering. For example, imagine the learning objective of a safety leadership class was for supervisors to choose between different forms of communication (like acknowledgement,

parroting, or paraphrasing). Based on this objective, you could come up with the following possible debriefing questions:

- What form of communication did you use in this activity?
- What occurred in this activity that you could use back on the job?
- What did you like least about the method of communication used in this exercise?

It is good to start off with generic debriefing questions such as “What did you like most about this activity?” Also, make sure you have a question or two that is going to help them take the training they received and apply it back in the workplace. In the above example, you could ask, “When would paraphrasing be good to use back on the job?” Keep in mind that you always want debriefing to lead to a two-way conversation. Do not ask questions that can be answered with a yes or no. Also, never tell someone that their answer is wrong. An answer to a debriefing exercise is based on a person’s perception of the experience so there is really no right or wrong answer. If you do get an answer that does not reflect what you saw, try to ask the question again in a different way. When you are in the planning phase of your training class, create more debriefing questions than you think you will need. Remember, debriefing is really a way for the trainees to discover for themselves what they have learned.

Summary

Safety professionals working in manufacturing are generally responsible for a great deal of safety training. This training, which is often repeated every year, can be more effective if class interaction is introduced. Safety games and activities can help to get the undivided attention of the employees we work with. It is our responsibility to make this training the best that it can be.

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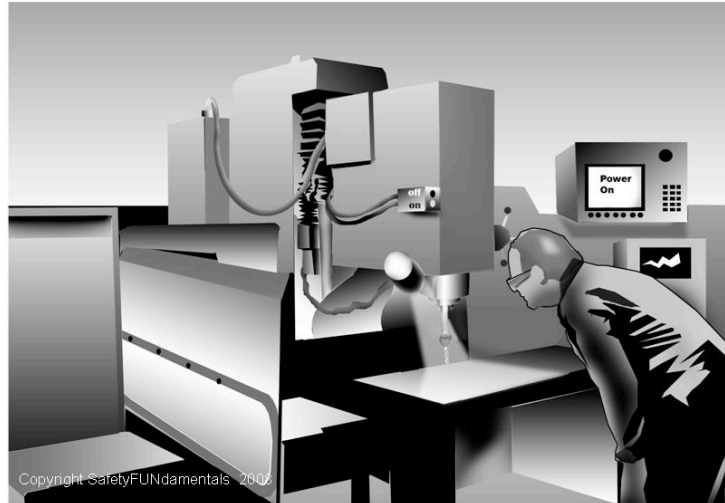
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Appendix A: Safety Sequence for Lock Out/Tag Out Training

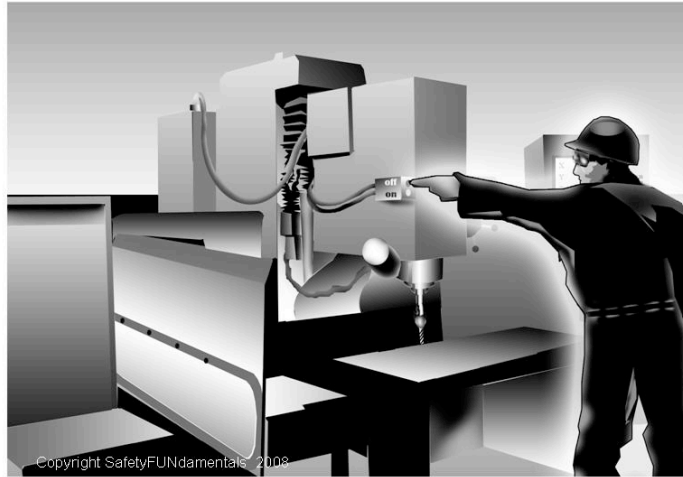
Inspect Work Area



Inform Workers in Area



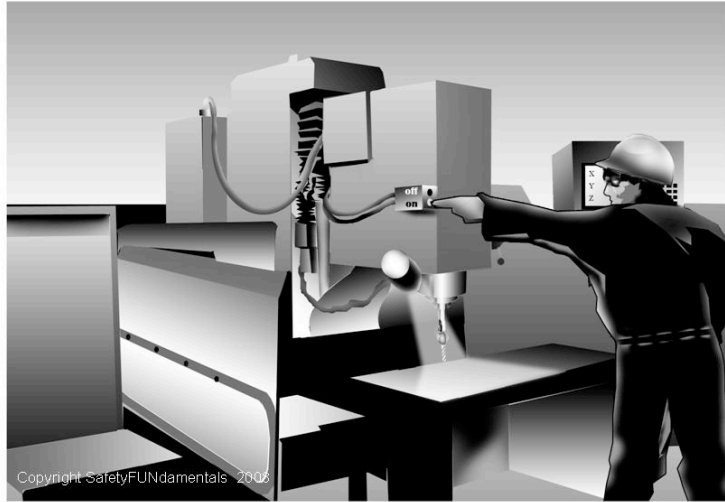
Turn Off Power



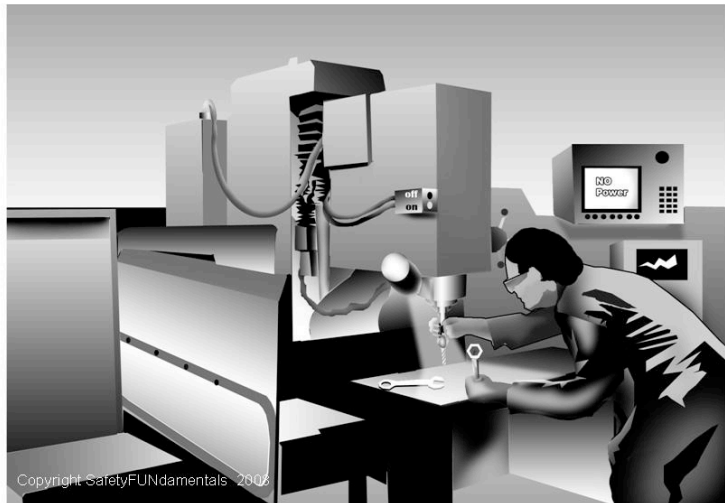
Apply Lock and Tag



Verifv Power is Off



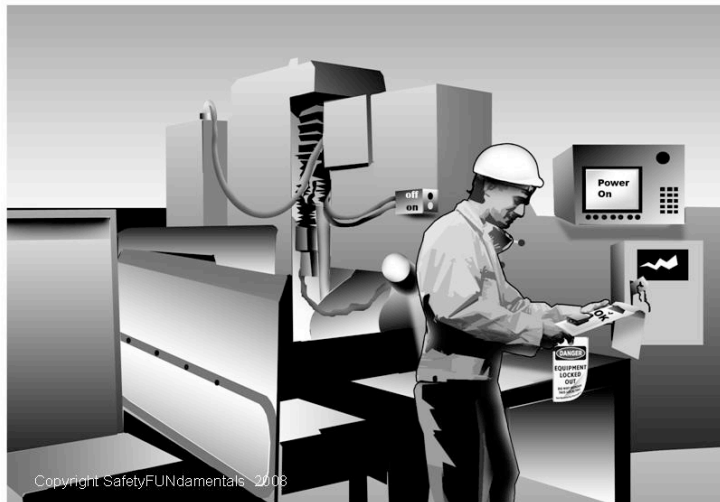
Work on Equipment



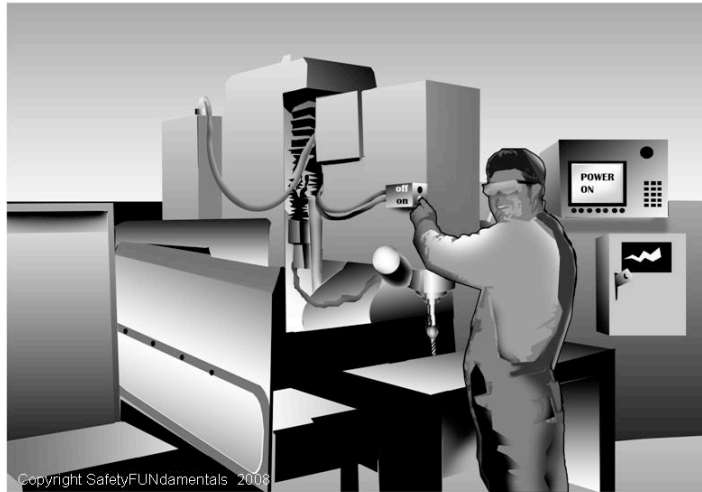
Clean Up Work Area



Remove Lock and Tag



Turn Power On



Notify Others that Work is Complete

