

## Storyboard Plan

[Basis of Instructor's Script to be found in the Instructor Manual and training materials]

Title: Proper Use of a Fire Extinguisher

Product Type: A combination declarative- and procedural-based learning experience with expected time burden of ~ 2 hours. It is designed to be completed in one live ILT session.

### SECTION 1: INTRODUCTION

#### Slide #0

Instructor Script & Actions	Anticipate Participant Actions	Slide	Rationale
<p>Do <i>Instructor greets the participants as they walk into the room and gather their training materials.</i></p> <p><i>After music stops, instructor formally introduces him/herself, welcoming the participants to the session.</i></p>	Stream into the room, sign to confirm registration, collect their training material, and settle themselves in their seats.	<p>Cover Slide</p> <p>Slide contains session title, instructor name and date.</p> <p>Low music that conveys danger plays from the slide.</p> <p>When the music stops, this will be a sign that the session is about to begin.</p>	Audio serves as a cue. Playing, it indicates the gravity of the topic to be covered. Stopped, it signals a transition, and redirects attentions.

### SECTION 1: INTRODUCTION

#### Slide #1

Instructor Script & Action	Anticipated Participant Actions	Slide	Rationale
<p>Do <i>Show pictures of locations that have suffered extensive fire damage.</i></p> <p><i>[While images appear on slide] Elaborate on these images with a short fire story of your own. Also make tactful reference to members of the work crew who were hurt during a recent incident on site.</i></p>	Participants watch the image montage and listen to the instructor's story.	<p>Fire Damage</p> <p>This slide shows a montage of the damage fire does.</p>	The images combined with the instructor's narrative establishes the training's relevance.

### SECTION 1: INTRODUCTION

#### Slides #2 - 3

Instructor Script & Action	Anticipated Participant Actions	Slide	Rationale
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<p>Say: <i>Today's session aims to make sure that if you are ever faced with an unexpected fire at work—or anywhere else—you know exactly how to properly use the fire extinguisher to put out the flames.</i></p> <p><i>Formally, this is today's goal...</i></p> <p>Do: <i>Show slide with objective</i></p> <p>Say: <i>I would like a volunteer to read the objective out loud.</i></p>	<p>One volunteer will read the objective aloud.</p>	<p>Learning Objective</p> <p>After completing this fire safety session, XYZ crew members will demonstrate proper use of a fire extinguisher when present with a small, controlled fire.</p>	<p>Goal orientation. Actions here foster the participants' sharp focus on the training's purpose.</p> <p>In addition to orienting the participants' thinking toward the lesson, the knowledge check also gives the instructor insight as to the depth (or lack there) of knowledge in the room.</p>
<p>Say: <i>Before diving head first in to the content, you will complete a quick knowledge check to see how much you already know on fire extinguisher use.</i></p> <p>Do: <i>Direct participants to the opening knowledge check in their materials.</i></p> <p>Do: <i>Allot roughly 10 minutes for the quiz. Reinforce that there is no pressure to be correct, that you are only trying to get a sense of their knowledge before the Lesson begins.</i></p> <p>During this time you can circulate to see how the participants respond to the questions. This will give you an idea of the depth of knowledge in the room.</p> <p>When everyone has finished, instruct the class to hold on to the knowledge check for later reference. Transition to the content.</p>	<p>Participants locate quiz in the materials and complete the knowledge check.</p>	<p>Knowledge Check</p> <p>The Knowledge Check banner with a 10-minute timer now presents. While they take the quiz, the objective remains on the slide.</p>	

Note: The speed of this first section will depend on the class' depth of knowledge on the topic before instruction.

SECTION 2: PARTS OF THE FIRE EXTINGUISHER  
Slide #5

Instructor Script & Action	Anticipated Participant Actions	Slide	Rationale
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<p>Say <i>Now we'll move on to the meat of the matter. Let's assume you are on the job site when a fire breaks out. There are portable fire extinguishers within a reachable distance. Great! But do you know how to use them? Using the extinguisher properly is not the most intuitive process, and learning how to use it while a fire rages is not the best time to learn.</i></p> <p><i>The first step in knowing how to use the extinguisher is becoming familiar with its parts. On page ____ of your materials is an image you will need for this portion of the training. Locate it now.</i></p> <p>Do <i>Pause a moment for everyone to find the referenced page and image.</i></p> <p>Say <i>We are most interested in the five main parts of the extinguisher: the <b>Body</b>, the <b>Safety Pin</b>, the <b>Hose and Nozzle</b>, the <b>Triggers or Handles</b>, and the <b>Gauge</b>.</i></p> <p>Do <i>Several things for this section: (1) when you say each of the five parts, click the clicker to have that extinguisher part appear on the slide. (2) Additionally, use the demo fire extinguisher on the table to make reference to the sections as you speak.</i></p> <p>Say <i>[Giving instructions] When I mention each section, I will elaborate on it and how it contributes to your firefighting efforts. On the diagram in front of you, make your own notes under each labeled section. These instructions are also atop the diagram in your materials.</i></p> <p><i>The <b>Body</b>: This is the metal canister than holds the extinguishing agent as well as the pressurized chemical that forces the extinguishing agent out of the canister and on to the fire.</i></p> <p><i>The <b>Safety Pin</b>: Keeps the triggers locked so the extinguisher is not accidentally discharged when not in use or before intended use.</i></p> <p><i>The <b>Hose and Nozzle</b>: The hose and nozzle allow the user to directly aim the extinguishing agent toward the flames. This is particularly true of the nozzle which can be found at the end of the hose.</i></p> <p><i>The <b>Handles or Triggers</b>: The handles are the point at which you force extinguishing agent out of the body, through the nozzle and/or hose and on</i></p>	<p>As the instructor identifies and discusses each part of the fire extinguisher, participants locate that labeled part on the diagram. Then in the space below it write—in their own words—what each part does and how it works.</p>	<p>Parts of The Fire Extinguisher</p> <p>The slide contains a labeled image of the extinguisher. This image is a replica of the one in the participant materials on page ____.</p>	<p>Signals in the form of arrows are used to focus attention.</p> <p>Partially worked example. In the participant materials, the image is labeled though it does not contain the detail on each labelled part. The partially worked example reduces cognitive load on the participants since they will need mental resources to listen to the instructor and, in their own words, add the detail for each part.</p>
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<p>to the fire. You'll squeeze both handles together to launch the extinguishing agent.</p> <p>Another part that we really should mention here is the <b>Gauge</b>. The gauge displays whether or not the pressure in the canister is at the correct level for proper usage. Too low a pressure and the contents will not make it out of the canister or not make it out forcefully enough to decrease the flames. Too high a pressure can lead to too forceful of an exit out of the cannister, creating a situation where the extinguisher is controlling the operator and not the other way around. And/or it may even cause damage to the fire extinguisher itself.</p> <p>So far, what are your questions?</p> <p>Do Answer questions as they come. Then provide a short break.</p>			
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10-minute Brain Break

Participants are encouraged to use this opportunity to **stretch, go to the restroom, converse with others about what they have learned so far**

**SECTION 2: PARTS OF THE FRE EXTINGUISHER**  
 Slides #7 - 12

Instructor Script & Actions	Anticipated Participant Actions	Slide	Rationale
<p>Do After reconvening, let the participants know they will soon do a quick knowledge check. Then give them 5-7 minutes to review the labeled and annotated diagram they now have on page ____.</p> <p>Say <i>You will now try to do this exercise without the assistance of notes. Try. I will show a part of the extinguisher in an image. Then I will ask you to fill in the blank with the name of the part. I will continue the sentence hoping you will then fill in the blank as to the part's function.</i></p> <p>For example, [while holding up an image of the gauge] "This is an image of the <b>GAUGE</b>, and its function is to <b>SHOW WHETHER OR NOT THE PRESSURE IN THE CANISTER IS AT AN ACCEPTABLE LEVEL FOR USE.</b>"</p>	<p>Participants volunteer to fill in each blank. As there are 8 blanks—though four images—at least 8 participants should provide a response that completes a blank.</p>	<p>Quick Knowledge Check</p> <p>This occurs in the form of an oral <i>Fill in the Blank</i>. Each image is presented and the statement stem below is read.</p> <p>"This is an image of the ____ and its function is to ____."</p>	<p>Semantic coding. This presentation-recall exercise is a different type of exposure and interaction with the material. Its purpose is to help move the information from short term memory to long term memory.</p>

<p>Do Go through each slide with the relevant images, repeating the sentence structures, "This is an image of the _____ and its function is to _____." Be sure to use the clicker to fill in the label once someone has correctly responded.</p> <p>Have participants volunteer and/or select different participants to complete each blank.</p>			
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**SECTION 3: USING THE FIRE EXTINGUISHER**  
**Slides #14 - 15**

Instructor Script & Actions	Anticipated Participant Actions	Slide	Rationale
<p>Say <i>As you are all now well versed on the parts and functions of a fire extinguisher, now you'll learn how to put that information into action.</i></p> <p>Do Use this slide to give an overview of the 6-7 steps of effective extinguisher usage. Be sure to emphasize the PASS acronym on the slide.</p> <p>Encourage participants to take notes as needed and ask questions, be sure to address their questions as clearly as possible.</p>	<p>Participants take notes and ask questions during this presentation. One possible question may be, <u>'Why should we spray the extinguishing agent at the base of the fire?'</u></p> <p>Because there is some knowledge on the topic amongst the participants—as gleaned from the first knowledge check—other participants may be able to correctly answer questions posed by the class.</p>	<p>PASS: Acronym</p> <ol style="list-style-type: none"> <li><b>O</b>btain fire extinguisher.</li> <li><b>P</b>osition yourself so the fire is in front of you and an exit is to your back; stand 10 – 20 feet away from the fire.</li> <li><b>P</b> – <b>PULL</b> safety pin.</li> <li><b>A</b> – <b>Aim</b> nozzle or hose at the base of the flames.</li> <li><b>S</b> – <b>Squeeze</b> handles together while extinguisher is upright.</li> <li><b>S</b> – <b>Sweep</b> extinguisher from side to side, covering the areas of the fire with the extinguishing agent. Watch the fire area. If the fire reignites, repeat the process.</li> <li><u>If the fire is not diminished</u>, leave the area at once.</li> </ol>	<p>Acronyms are a good mnemonic device for the compression of large amounts of vital information into easily remembered chunks.</p>
<p>Do Once all questions have been addressed, play the PASS instructional video.</p> <p>Ask participants to comment on the video they just saw. Some possible prompts are below:</p> <ul style="list-style-type: none"> <li>- What are your thoughts?</li> <li>- Is there anything that looked the way you imaged?</li> </ul>		<p>PASS: Video</p> <p>Play video that demonstrates the above steps in action.</p>	<p>Video gives the learner a clear mental picture of what mastery looks like, and what they should strive for as they learn the material. It's an anchor on which everything learned can be connected. This is particularly true in this training since proof of learning and on-the-job performance are highly visible behaviors.</p>

- Or the opposite, anything that looked different from how you imaged?			
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10-minute Brain Break

Participants are encouraged to use this opportunity to **stretch, go to the restroom, converse with others about what they have learned so far**

*FOR THE INSTRUCTOR:* Use this time to check on and make any necessary adjustments to the testing station in the parking lot.

**SECTION 3: USING THE FIRE EXTINGUISHER**  
Slides 16

Instructor Script & Actions	Anticipated Participant Actions	Slide	Rationale
<p>Do Divide class into groups of 3 or 4 people.</p> <p>Instruct participants on the next activity</p> <p>Cycle from group to group providing feedback as individuals go through the actions, or at the end as necessary. If you see anyone get stuck during his/her turn, coach him/her through it.</p>	<p>Within each of their groups, each participant is given the opportunity to demonstrate his/her firefighting skills.</p> <p>The participant will</p> <ol style="list-style-type: none"> <li>1. use an empty/dummy fire extinguisher to go through the 6 – 7 motions.</li> <li>2. fight a simulated/makeshift fire in the classroom.</li> <li>3. say the steps aloud as s/he completes each action.</li> </ol>	<p>Practice</p> <p>Directions: In your groups of 4, each person will take turns fully acting out fighting flames. Decide who will go when, then after one person in the group says, “go” you are to</p> <ul style="list-style-type: none"> <li>- locate the fire extinguisher,</li> <li>- position yourself, and</li> <li>- use the extinguisher to put out the simulated fire.</li> </ul> <p>You are also tasked with talking through your steps while performing them. Be sure to give each other feedback.</p>	<p>This physical practice is an extension of the previous step. Its purpose is to reinforce the knowledge and build automaticity.</p> <p>The activity also gives the participants a real sense of the fire extinguisher's weight.</p> <p>The group structure is a way to keep everyone actively engaged, which may not be the case if each person were to complete this one at a time in front the class. This format is also faster than one-by-one performances.</p>

**SECTION 3: USING THE FIRE EXTINGUISHER**  
Slide #17

Instructor Script & Actions	Anticipated Participant Actions	Slide	Rationale
<p>Do When everyone has completed their practice, instruct the class to once again assume their seats and locate the first knowledge check on page____ completed at the beginning of the session.</p>	<p>Participant will locate their pre-assessment knowledge check. They will volunteer responses as the instructor reviews the questions.</p>	<p>Check Your Learning</p> <p>Knowledge Check 1 questions displayed.</p>	<p>The review reinforces learning and allows the participants to definitively see how much they have learned in the session.</p>

Review all 10 questions, ensuring the correct responses are discussed. Encourage the participants to express how much they have learned.			
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SECTION 4: ASSESSMENT  
Slide #18

Instructor Script & Actions	Anticipated Participant Actions	Slide	Rationale
<p>Do Direct participants toward the checklist on the slide and on page ____ of their materials. Let them know these are the criteria on which they will be assessed once they go outside for the final performance.</p> <p>Ask all to place their names at the top of the rubric. This is the rubric they will submit to you before they begin their final performance for summative assessment.</p>	Participants review the checklist.	<p>Assessment</p> <p>Before the participants exit for the parking lot, this slide will show the checklist to be used to assess the participants on their final performance.</p>	<p>This is an opportunity to measure whether participants have actually learned the content of the last ≈ 2 hours.</p> <p>For this type of content, the participant either completed the action or not. There are no varying degrees of mastery for each item, hence the checklist assessment option.</p>
<p>Do Escort the participant to the parking lot where stations are set up.</p> <p>Give the students clear directions detailing how they will proceed during this assessment. See a potential script directly below:</p> <p><i>After submitting your checklist to me, I will set a controlled fire. I will let you know when to take your position at the marked starting point. Once I give the signal, the simulation has begun, and you are to accurately demonstrate proper use of a fire extinguisher to put out the fire.</i></p> <p>Select each participant individually. They will give you their rubric.</p> <p>Set the controlled fire, then prompt the participant to begin the process of putting it out.</p> <p>Score participants on their actions as they perform the task.</p> <p><i>If students freeze up or performed poorly, they may be allowed a second attempt. This is at your discretion.</i></p>	After the instructor sets a small fire, each participant goes through the steps they have learned to put out the fire.		

Once everyone has completed the exercise, dismiss the session.			
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**Dismissal**  
Dismiss the class with a few parting words of your choice.

**SUMMARY**

Learning Strategies	<ul style="list-style-type: none"> <li>• Demonstrations &amp; Instructional videos</li> <li>• Labeling: Use of diagrams</li> <li>• Peer-to-peer learning</li> <li>• PowerPoint As Support Visuals</li> <li>• Practice</li> <li>• Recitation</li> <li>• Repetition</li> <li>• Signaling</li> <li>• Storytelling</li> <li>• Tracking Learning</li> </ul> <p>Additionally, the theoretical support for these strategies are provided by <i>Adult Learning Theory, Cognitive Learning Theory, Cognitive Load Theory, Gagne's Nine Events of Instruction, and Merrill's First Principles of Instruction.</i></p>
Interactivity & Information Delivery	<ul style="list-style-type: none"> <li>• Demonstration / Video</li> <li>• Group activity</li> <li>• Knowledge Check: Oral Quizzing</li> <li>• Labelling</li> <li>• Lecture–Demonstration Format</li> </ul>
Methods of Assessment	<ul style="list-style-type: none"> <li>• Knowledge checks (inclusive of a pre-assessment).</li> <li>• Coaching and feedback during practice exercises.</li> <li>• Performance checklist for final assessment.</li> </ul>
Visual / Design	<ul style="list-style-type: none"> <li>• Images were used to (1) reinforce need for training, (2) as part of instructional diagrams, and (3) to encourage the development of mental schemas with regard to expected performance.</li> <li>• The template as provided was limiting with the out of place blue, but I did use where practical. I tried to create a more apt fire motif with other slides.</li> </ul>