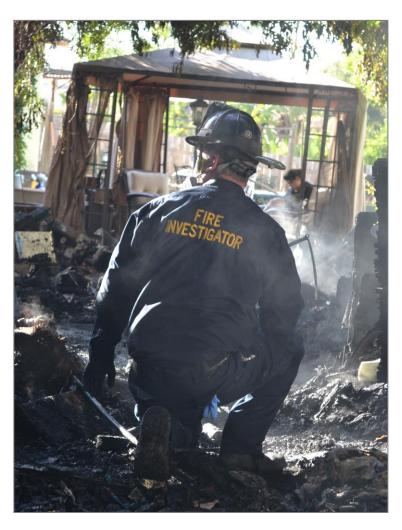
Fire Investigator

(NFPA 1033: Fire Investigator)

Certification Training Standards Guide (2022)





California Department of Forestry and Fire Protection Office of the State Fire Marshal State Fire Training

Fire Investigator

Certification Training Standards Guide (2022)

Publication Date: August 2024

This CTS guide utilizes the following NFPA standards to provide the qualifications for State Fire Training's Fire Investigator (2022) curriculum:

• NFPA 1033: Standard for Professional Qualifications for Fire Investigator (2022)

State Fire Training coordinated the development of this CTS guide. Before its publication, the Statewide Training and Education Advisory Committee (STEAC) and the State Board of Fire Services (SBFS) recommended this CTS guide for adoption by the Office of the State Fire Marshal (OSFM).

Cover photo courtesy of Wayne Whitney, Captain/Fire Investigator, MAST, San Diego Fire Rescue.

Published by State Fire Training.

Table of Contents

Acknowledgements	1
How to Read a CTS Guide	2
Fire Investigator	4
Section 1: Roles and Responsibilities	4
1-1: Foundational Knowledge and Skills for a Fire Investigator	4
Section 2: Scene Examination	5
2-1: Securing the Fire Ground	5
2-2: Conducting an Exterior Survey	6
2-3: Conducting an Interior Survey	8
2-4: Interpreting and Analyzing Fire Patterns (Singular)	. 10
2-5: Interpreting and Analyzing Fire Patterns (Sequential)	
2-6: Examining and Removing Fire Debris	
2-7: Reconstructing Potential Area(s) of Origin	. 14
2-8: Inspecting and Analyzing the Performance of Building Systems	
2-9: Discriminating the Effects of Explosions	
Section 3: Scene Documentation	. 17
3-1: Sketching and Diagramming the Scene	. 17
3-2: Photographing the Scene	
3-3: Constructing Investigative Notes	. 19
Section 4: Evidence Collection and Preservation	. 20
4-1: Utilizing Proper Procedures for Managing Victims and Fatalities	. 20
4-2: Working with Evidence	
4-3: Selecting Evidence for Analysis	. 22
4-4: Maintaining a Chain of Custody	
4-5: Disposing of Evidence	
Section 5: Interview	. 25
5-1: Developing an Interview Plan	. 25
5-2: Conducting an Interview	
5-3: Evaluating Interview Information	. 28
Section 6: Wildland Fire Investigation	. 29
6-1: Wildland Fire Investigator Roles and Responsibilities	. 29
6-2: Documenting a Wildland Fire Scene	
6-3: Identifying Origin Areas	
6-4: Identifying Wildland Fire Ignition Source and Cause	
6-5: Working with Wildland Fire Evidence	
Section 7: Post-Incident Investigation	
7-1: Gathering Reports and Records	
7-2: Evaluating the Investigative File	
7-3: Coordinating Expert Resources	
7-4: Establishing Evidence as to Means, Motive, and Opportunity	

Table of Contents

7-5: Formulating an Opinion	8
Section 8: Presentations	
8-1: Preparing a Written Report	39
8-2: Expressing Investigative Findings	
8-3: Testifying During Legal Proceedings4	

Acknowledgements

State Fire Training appreciates the hard work and accomplishments of those who built the solid foundation on which this program continues to grow.

State Fire Training gratefully acknowledges the following individuals and organizations for their diligent efforts and contributions that made the development and publication of this document possible.

CAL FIRE

- Joe Tyler, Director
- Daniel Berlant, State Fire Marshal
- Chris Fowler, Chief of State Fire Training
- Mike Richwine, Chair, Statewide Training and Education Advisory Committee (STEAC);
 State Fire Marshal (Ret.), CAL FIRE

Cadre – 2023 Curriculum Development

Leadership

- Chris Fowler, Cadre Lead, Chief of State Fire Training
- Kristin Thiel, Editor, Sacramento State
- Allison L. Shaw, Editor, Sacramento State

Members (Development and Validation)

- Gillian Boxx, Captain/Arson Investigator, San Jose Fire Department
- Jeremy Davis, Assistant Fire Marshal, Santa Clara County Fire
- Stephen Engler, Lieutenant/Investigator (Ret.), San Francisco Fire Department BFI
- Tim Enright, Captain/Fire Investigator, Clements Fire District
- Bryan Gougé, Senior Arson and Bomb Investigator, CAL FIRE-OSFM
- Scott Kuhlman, Fire Captain/Fire Investigator, Orange County Fire Authority
- Shane Lauderdale, Deputy Fire Chief (Ret.), North County Fire Authority
- Zak Nokes, Fire Investigator, Sacramento Fire Department
- Edward Nordskog, Detective (Ret.), Los Angeles County Sheriff Arson/Bomb
- Brendan O'Leary, Assistant Deputy Chief (Ret.), San Francisco Fire Department
- Nicholas Schroeder, Arson and Bomb Investigator, CAL FIRE-OSFM
- Amy Segui, Assistant Fire Marshal, Petaluma Fire Department
- Jake Tomlin, Fire Marshal/Battalion Chief, City of Santa Clara Fire Department
- Christopher Van Cor, Deputy Chief, Investigations Unit, CAL FIRE
- Wayne Whitney, Captain/Fire Investigator, MAST, San Diego Fire Rescue

How to Read a CTS Guide

Overview

A curriculum training standard (CTS) guide lists the requisite knowledge, skills, and job performance requirements an individual must complete to become certified in a specific job function.

It also documents and justifies the OSFM-approved revisions to the curriculum's NFPA standard and identifies where each curriculum training standard is taught (course plan), tested (skill sheets), and validated (task book).

Individuals aspiring to meet State Fire Training's curriculum training standards must do so in accordance with the codes, standards, regulations, policies, and standard operating procedures applicable within their own agency or jurisdiction.

Format

Each curriculum training standard is comprised of eight sections.

Section Heading

Training standards are grouped by section headings that describe a general category. For example, the Fire Fighter 1 CTS guide includes the following section headings: NFPA Requirements, Fire Department Communications, Fireground Operations, and Preparedness and Maintenance.

Training Standard Title

The training standard title provides a general description of the performance requirement contained within the individual standard.

Authority

The CTS guide references each individual standard with one or more paragraphs of the corresponding National Fire Protection Association (NFPA) Professional Qualifications. This ensures that each fire service function within California's certification system meets or exceeds NFPA standards.

When California requirements exceed the NFPA standard, the CTS guide cites the Office of the State Fire Marshal as the authority and prints the corresponding information in shaded gray.

Job Performance Requirements

This segment includes a written statement that describes a specific job-related task, the items an individual needs to complete the task, and measurable or observable outcomes.

Requisite Knowledge

This segment lists the knowledge that an individual must acquire to accomplish the job performance requirement.

Requisite Skills

This segment lists the skills that an individual must acquire to accomplish the job performance requirement.

Content Modification

This table documents and justifies any revisions to the NFPA standard that the development or validation cadres make during the development of a CTS guide.

Cross Reference

This table documents where each training standard is taught (course plan), tested (skill sheets), and validated (task book).

Fire Investigator

Section 1: Roles and Responsibilities

1-1: Foundational Knowledge and Skills for a Fire Investigator

Authority

- 1. NFPA 2022: Standard for Professional Qualifications for Fire Investigator (2022)
 - Paragraph 4.1.2, 4.1.3, 4.1.4, 4.1.5, 4.1.6, 4.1.7

Job Performance Requirement

There are no job performance requirements identified for this training standard.

Requisite Knowledge

- 1. Employ all elements of the scientific method as the operating analytical process throughout the investigation and for the drawing of conclusions
- 2. Complete site safety assessments on all scenes
- 3. Follow regional and national safety standards
- 4. Include regional and national safety standards in organizational policies and procedures
- 5. Maintain necessary liaison with other interested professionals and entities
- 6. Adhere to all applicable legal and regulatory requirements
- 7. Understand the organization and operation of the investigative team within an incident management system
- 8. Remain current in the subjects listed as "requisite knowledge" as they relate to fire investigations, including fire science, fire investigation, fire scene safety, and building systems

Requisite Skills

1. None

Content Modification

Block	Modification	Justification

Course Plan	Skill Sheet	Task Book
Fire Investigator 1A: Basic Fire Investigation (2022)	N/A	N/A
• Topic 1-3		

Section 2: Scene Examination

2-1: Securing the Fire Ground

Authority

- 1. NFPA 1033: Standard for Professional Qualifications for Fire Investigator (2022)
 - Paragraph 4.2.1

Job Performance Requirement

Secure the fire ground, given marking devices, sufficient personnel, and special tools and equipment, so that unauthorized persons can recognize the perimeters of the investigative scene and are kept from restricted areas and all evidence or potential evidence is protected from damage or destruction.

Requisite Knowledge

- 1. Identify fire ground hazards
- 2. Identify types of evidence
- 3. Describe the importance of fire scene security
- 4. Describe evidence preservation
- 5. Describe issues relating to spoliation

Requisite Skills

1. Use marking devices, tools, and equipment

Content Modification

Block	Modification	Justification
RS1	Added ", tools, and	It's important to learn how to use marking tools and
	equipment".	equipment alongside marking devices.

Course Plan	Skill Sheet	Task Book
Fire Investigator 1A: Basic First	N/A	Fire Investigator (2022) Certification
Investigation (2022)		Task Book
• Topic 2-1		• JPR 1

2-2: Conducting an Exterior Survey

Authority

- 1. NFPA 1033: Standard for Professional Qualifications for Fire Investigator (2022)
 - Paragraph 4.2.2

Job Performance Requirement

Conduct an exterior survey, given standard equipment and tools, so that evidence is identified and preserved, fire damage is interpreted and analyzed, hazards are identified to avoid injuries, accessibility to the property is determined, including all potential means of ingress and egress.

Requisite Knowledge

- 1. Identify types of building construction
- 2. Identify effects of fire on construction materials
- 3. Identify types of evidence commonly found in the perimeter
- 4. Identify evidence preservation methods
- 5. Identify effects of fire suppression
- 6. Identify fire behavior and spread
- 7. Identify fire patterns
- 8. Identify dangers of hazardous materials

Requisite Skills

- 1. Assess fire ground and structural condition
- 2. Evaluate the damage from and effects of the fire
- 3. Interpret and analyze fire patterns

Content Modification

Block	Modification	Justification
JPR	Changed "determined and all potential means of	The two concepts are directly
	ingress and egress are discovered" to "determined,	linked.
	including all potential means of ingress and egress".	
RK8	Deleted "a basic awareness of".	This entire course focuses on a
		basic awareness.
RS2	Changed "Observe" to "Evaluate".	"Evaluate" is a stronger verb
		that is in better alignment with
		observable learning.

Course Plan	Skill Sheet	Task Book
Fire Investigator 1A: Basic First	N/A	Fire Investigator (2022) Certification
Investigation (2022)		Task Book
 Topic 2-2 (RK1, RK2, RK3, 		• JPR 2
RK4, RK5, RK6, RK7, RK8, RS1,		
RS2, RS3)		
• Topic 2-3 (RS1)		

2-3: Conducting an Interior Survey

Authority

- 1. NFPA 1033: Standard for Professional Qualifications for Fire Investigator (2022)
 - Paragraph 4.2.3

Job Performance Requirement

Conduct an interior survey, given standard equipment and tools, so that areas of potential evidentiary value requiring further examination are identified and preserved, the evidentiary value of contents is determined, and hazards are identified in order to avoid injuries.

Requisite Knowledge

- 1. Identify types of building construction and interior finishes
- 2. Recognize effects of fire on interior finishes
- 3. Recognize effects of fire suppression
- 4. Identify fire behavior and spread
- 5. Identify evidence preservation methods
- 6. Identify fire patterns
- 7. Recognize effects of building contents on fire growth
- 8. Identify relationship of building contents to the overall investigation
- 9. Identify weather conditions at the time of the fire
- 10. Identify fuel moisture

Requisite Skills

- 1. Assess structural conditions
- 2. Evaluate the damage and effects of the fire
- 3. Determine the impact of fire suppression efforts on fire flow and heat propagation
- 4. Evaluate protected areas to determine the presence and/or absence of contents

Content Modification

Block	Modification	Justification
RK1	Changed "The types of building construction and	It is important for learning
RK2	interior finish and the effects on those materials" to	to separate these two
	"Identify types of building construction and interior	points.
	finishes" and "Recognize effects of fire on interior	
	finishes".	
RS2	Changed "Observe" to "Evaluate".	"Evaluate" is a stronger
		verb that is in better
		alignment with observable
		learning.

Course Plan	Skill Sheet	Task Book
Fire Investigator 1A: Basic First Investigation	N/A	Fire Investigator (2022)
(2022)		Certification Task Book
 Topic 2-3 (RK1, RK2, RK3, RK4, RK5, 		• JPR 3
RK6, RK7, RK8, RS1, RS3, RS4)		
 Topic 2-2 (RK9, RS2) 		
Fire Investigator 1B: Evidence,		
Documentation, Interviews, and Wildland		
(2022)		
 Topic 4-3 (RK10) 		

2-4: Interpreting and Analyzing Fire Patterns (Singular)

Authority

- 1. NFPA 1033: Standard for Professional Qualifications for Fire Investigator (2022)
 - Paragraph 4.2.4

Job Performance Requirement

Interpret and analyze fire patterns, given standard equipment and tools and some structural or content remains, so that each pattern is identified and analyzed with respect to the burning characteristics of the material involved, the stage of fire development, the effects of ventilation within the context of the scene, the relationship with all patterns observed, and the understanding of the methods of heat transfer that led to the formation of the patterns identified and analyzed, and the sequence in which the patterns were produced is determined.

Requisite Knowledge

- 1. Describe fire dynamics, including stages of fire development
- 2. Describe methods of heat transfer
- 3. Describe compartment fire development
- 4. Describe the interrelationship of heat release rate (HRR), form, and ignitibility of materials
- 5. Describe the impact and effects of ventilation on the creation of the fire patterns

Requisite Skills

- 1. Interpret and analyze the effects of burning characteristics of the fuel involved
- 2. Interpret and analyze the effects of ventilation on different types of materials

Content Modification

Block	Modification	Justification

Course Plan	Skill Sheet	Task Book
Fire Investigator 1A: Basic First	N/A	Fire Investigator (2022) Certification
Investigation (2022)		Task Book
Topic 3-1		• JPR 4

2-5: Interpreting and Analyzing Fire Patterns (Sequential)

Authority

- 1. NFPA 1033: Standard for Professional Qualifications for Fire Investigator (2022)
 - Paragraph 4.2.5

Job Performance Requirement

Interpret and analyze fire patterns, given standard tools and equipment and some structural or content remains, so that fire development, fire spread, and the sequence in which fire patterns were developed (i.e., sequential pattern analysis) are determined; methods and effects of suppression are analyzed; fire patterns and effects indicating a hypothetical area or areas of origin are recognized and tested; false or refuted hypothetical areas of origin are eliminated; and all fire patterns are tested against the data, such that the area(s) of origin is correctly identified.

Requisite Knowledge

- 1. Describe fire development and spread based on fire chemistry
- 2. Describe fire dynamics, including compartment fire development
- 3. Describe fire spread
- 4. Describe fire suppression effects
- 5. Describe building construction
- 6. Describe fuel gas systems
- 7. Describe electricity and electrical systems

Requisite Skills

- 1. Analyze variations of fire patterns on different materials with consideration given to HRR, form, ignitability of the fuels involved, and the effects of ventilation
- 2. Understand the impact of different types of fuel packages on pattern creation
- 3. Analyze and correlate information

Content Modification

Block	Modification	Justification

Course Plan	Skill Sheet	Task Book
Fire Investigator 1A: Basic First	N/A	Fire Investigator (2022) Certification
Investigation (2022)		Task Book
Topic 3-1		• JPR 5

2-6: Examining and Removing Fire Debris

Authority

- 1. NFPA 1033: Standard for Professional Qualifications for Fire Investigator (2022)
 - Paragraph 4.2.6

Job Performance Requirement

Examine and remove fire debris, given standard or, if necessary, special equipment and tools, so that fire patterns and fire effects concealed by debris are discovered and analyzed; all debris within the potential area(s) of origin is checked for fire cause evidence; potential ignition source(s) is identified; and evidence is preserved without investigator-inflicted damage or contamination.

Requisite Knowledge

- 1. Describe ignition processes
- 2. Describe characteristics of ignition sources
- 3. Describe the ignitability of various fuels
- 4. Discuss the use of tools and equipment during the debris search
- 5. Describe delayering techniques for debris removal
- 6. Identify types of fire cause evidence commonly found
- 7. Describe evidence spoliation and techniques to avoid it
- 8. Describe evidence collection and preservation methods and documentation

Requisite Skills

- 1. Demonstrate search techniques that further the discovery of fire cause evidence and ignition sources
- 2. Use search techniques that incorporate documentation
- 3. Collect and preserve evidence

Content Modification

Block	Modification	Justification
RK3	Changed "ease of ignition of fuels" to "Describe	This is clearer without changing
	the ignitability of various fuels".	the meaning.
RK4	Changed "use of tools, equipment, and special equipment during the debris search" to "Discuss the use of tools and equipment during the debris search".	This is clearer without changing the meaning.
RK5	Changed "debris-layering techniques" to "Describe delayering techniques for debris removal".	This is more correct.
RK7	Changed "understanding" to "Describe".	"Describe" is a demonstratable skill.

Fire Investigator Section 2: Scene Examination

RS1	Changed "Employ" to "Demonstrate".	"Demonstrate" is a stronger verb
		that is in better alignment with
		observable learning.

Course Plan	Skill Sheet	Task Book
Fire Investigator 1A: Basic First	N/A	Fire Investigator (2022) Certification
Investigation (2022)		Task Book
• Topic 3-3		• JPR 6

2-7: Reconstructing Potential Area(s) of Origin

Authority

- 1. NFPA 1033: Standard for Professional Qualifications for Fire Investigator (2022)
 - Paragraph 4.2.7
- 2. Office of the State Fire Marshal

Job Performance Requirement

Reconstruct potential area(s) of origin, given standard and, if needed, special equipment and tools as well as sufficient personnel, so that all protected areas and fire patterns are identified and correlated to contents or structural remains; and items potentially critical to cause determination are returned to their prefire location as a means of hypothesis testing, such that the area(s) or point(s) of origin is discovered.

Requisite Knowledge

- 1. Describe the effects of fire on different types of material
- 2. Describe the importance and uses of reconstruction
- 3. Describe the reconstruction process

Requisite Skills

- 1. Examine all materials to determine the effects of fire
- 2. Identify and distinguish among different types of fire-damaged contents
- 3. Return materials to their original position using protected areas and fire patterns

Content Modification

Block	Modification	Justification
RK3	Added "Describe the	Reconstructing a fire scene is necessary to identify fire
	reconstruction process".	effects and patterns leading to area of origin. Need to
		describe how to carry out the process.

Course Plan	Skill Sheet	Task Book
Fire Investigator 1A: Basic First	N/A	Fire Investigator (2022) Certification
Investigation (2022)		Task Book
• Topic 2-2, 2-3 (RK1, RS1, RS2)		• JPR 7
 Topic 3-4 (RK2, RK3) 		

2-8: Inspecting and Analyzing the Performance of Building Systems

Authority

- 1. NFPA 1033: Standard for Professional Qualifications for Fire Investigator (2022)
 - Paragraph 4.2.8

Job Performance Requirement

Inspect and analyze the performance of building systems, including fire protection, detection and suppression systems, HVAC, electricity and electrical systems, fuel gas systems, and building compartmentation, given standard and special equipment and tools, so that a determination can be made as to the need for expert resources; an operating system's impact on fire growth and spread is considered in identifying origin areas; defeated and failed systems are identified; and the system's potential as a fire cause is recognized.

Requisite Knowledge

- 1. Describe different types of fire protection, detection, suppression, HVAC, electricity and electrical systems, fuel gas systems, and building compartmentation such as fire walls and fire doors
- 2. Identify types of expert resources for building systems
- 3. Describe the impact of fire on various systems
- 4. Describe common methods used to defeat a system's functional capability
- 5. Describe types of failures

Requisite Skills

- 1. Determine the system's operation and its effect on the fire
- 2. Identify alterations to, and failure indicators of, building systems
- 3. Evaluate the impact of suppression efforts on building systems

Content Modification

Block	Modification	Justification

Course Plan	Skill Sheet	Task Book
Fire Investigator 1A: Basic First	N/A	Fire Investigator (2022) Certification
Investigation (2022)		Task Book
 Topic 3-5 		• JPR 8

2-9: Discriminating the Effects of Explosions

Authority

- 1. NFPA 1033: Standard for Professional Qualifications for Fire Investigator (2022)
 - Paragraph 4.2.9

Job Performance Requirement

Discriminate the effects of explosions from other types of damage, given standard equipment and tools, so that an explosion is identified and its evidence is preserved.

Requisite Knowledge

- 1. Describe different types of explosions and their causes
- 2. Describe the characteristics of an explosion
- 3. Explain the difference between low- and high-order explosions

Requisite Skills

- 1. Identify explosive effects on glass, walls, foundations, and other building materials
- 2. Distinguish between low- and high-order explosion effects
- 3. Analyze damage to document the blast zone and origin

Content Modification

Block	Modification	Justification

Course Plan	Skill Sheet	Task Book
Fire Investigator 1A: Basic First	N/A	Fire Investigator (2022) Certification
Investigation (2022)		Task Book
• Topic 3-2		• JPR 9

Section 3: Scene Documentation

3-1: Sketching and Diagramming the Scene

Authority

- 1. NFPA 1033: Standard for Professional Qualifications for Fire Investigator (2022)
 - Paragraph 4.3.1

Job Performance Requirement

Sketch and diagram the scene, given standard tools and equipment, so that the scene is accurately represented and evidence, pertinent contents, significant patterns, and area(s) or point(s) of origin are identified.

Requisite Knowledge

- 1. Define commonly used symbols and legends that clarify the diagram
- 2. Describe types of evidence and patterns that need to be documented
- 3. Identify formats for diagramming the scene

Requisite Skills

- 1. Sketch the scene
- 2. Perform basic drafting skills
- 3. Locate evidence
- 4. Demonstrate observational skills

Content Modification

Block	Modification	Justification
JPR	Added "Sketch and".	Sketching and diagramming are distinct actions, and since both are included in 4.3.1, both should be included in the
		JPR.
RS2	Added "Perform".	NFPA did not provide a verb.
RS3	Changed "Recognize" to "Locate".	When you sketch and diagram, you are locating evidence, not recognizing it.
RS4	Added "Demonstrate".	NFPA did not provide a verb.

Course Plan	Skill Sheet	Task Book
Fire Investigator 1B: Evidence, Documentation,	N/A	Fire Investigator (2022)
Interviews, and Wildland (2022)		Certification Task Book
Topic 2-2		• JPR 10

3-2: Photographing the Scene

Authority

- 1. NFPA 1033: Standard for Professional Qualifications for Fire Investigator (2022)
 - Paragraph 4.3.2
- 2. Office of the State Fire Marshal

Job Performance Requirement

Photographically document the scene, given standard tools and equipment, so that the scene is accurately depicted and the photographs support scene findings.

Requisite Knowledge

- 1. Discuss working knowledge of high-resolution camera and flash
- 2. Discuss types of media capture and collection
- 3. Describe the strengths and limitations of each type of media capture and collection
- 4. Describe the process of photographing the scene

Requisite Skills

1. Use a high-resolution camera, flash, and accessories

Content Modification

Block	Modification	Justification
RK2	Changed "of film, media, and flash	This change reaches the same conclusion as
	available" to "of media capture and	the original while allowing for growth in the
	collection".	technology.
RK3	Added "type of media capture and	The original wording is no longer clear when
	collection".	the points are broken up into CTS
		formatting.
RK4	Added "Describe the process of	This is an important part of this topic.
	photographing the scene".	

Course Plan	Skill Sheet	Task Book
Fire Investigator 1B: Evidence, Documentation,	N/A	Fire Investigator (2022)
Interviews, and Wildland (2022)		Certification Task Book
Topic 2-1		• JPR 11

3-3: Constructing Investigative Notes

Authority

- 1. NFPA 1033: Standard for Professional Qualifications for Fire Investigator (2022)
 - Paragraph 4.3.3
- 2. Office of the State Fire Marshal

Job Performance Requirement

Construct investigative notes, given a fire scene, available documents (e.g., prefire plans and inspection reports), and interview information, so that the notes are accurate and provide further documentation of the scene.

Requisite Knowledge

- 1. Describe the relationship between notes, diagrams, and photos
- 2. Describe how to reduce scene information into concise notes
- 3. Discuss using notes during report writing and legal proceedings

Requisite Skills

- 1. Demonstrate data-reduction skills
- 2. Demonstrate note-taking skills
- 3. Demonstrate observational and correlating skills

Content Modification

Block	Modification	Justification
JPR	Changed "so that the notes are accurate, provide	Investigations are ongoing events,
	further documentation of the scene, and	so investigative notes are data
	represent complete documentation of the scene	collection, not a conclusion.
	findings" to "so that the notes are accurate and	Complete findings would be
	provide further documentation of the scene".	covered in final report.
RS1	Added "Demonstrate".	NFPA did not provide a verb.
RS2	Added "Demonstrate".	NFPA did not provide a verb.
RS3	Added "Demonstrate".	NFPA did not provide a verb.

Course Plan	Skill Sheet	Task Book
Fire Investigator 1B: Evidence, Documentation,	N/A	Fire Investigator (2022)
Interviews, and Wildland (2022)		Certification Task Book
Topic 2-3		• JPR 12

Section 4: Evidence Collection and Preservation

4-1: Utilizing Proper Procedures for Managing Victims and Fatalities

Authority

- 1. NFPA 1033: Standard for Professional Qualifications for Fire Investigator (2022)
 - Paragraph 4.4.1

Job Performance Requirement

Utilize proper procedures for managing victims and fatalities, given a protocol and appropriate personnel, so that all evidence is discovered and preserved and the protocol procedures are followed.

Requisite Knowledge

- 1. Describe types of evidence associated with fire victims and fatalities
- 2. Discuss evidence preservation methods

Requisite Skills

- 1. Demonstrate observational skills
- 2. Apply protocols to given situations

Content Modification

Block	Modification	Justification
RS1	Added "Demonstrate".	NFPA did not provide a verb.

Course Plan	Skill Sheet	Task Book
Fire Investigator 1B: Evidence, Documentation,	N/A	Fire Investigator (2022)
Interviews, and Wildland (2022)		Certification Task Book
• Topic 3-2		• JPR 13

4-2: Working with Evidence

Authority

- 1. NFPA 1033: Standard for Professional Qualifications for Fire Investigator (2022)
 - Paragraph 4.4.2

Job Performance Requirement

Locate, document, collect, label, package, and store evidence, given standard or special tools and equipment and evidence collection materials, so that evidence is properly identified, preserved, collected, packaged, and stored for use in testing, legal, or other proceedings and examinations, ensuring cross-contamination and investigator-inflicted damage to evidentiary items are avoided and the chain of custody is established.

Requisite Knowledge

- 1. Describe types of evidence
- 2. Describe authority requirements
- 3. Describe the impact of removing evidentiary items on civil or criminal proceedings (exclusionary or fire-cause supportive evidence)
- 4. Explain types, capabilities, and limitations of standard and special tools and equipment used to locate evidence
- 5. Identify types of laboratory tests available
- 6. Identify packaging techniques and materials
- 7. Explain the impact of evidence collection on the investigation

Requisite Skills

- 1. Recognize different types of evidence
- 2. Determine whether evidence is critical to the investigation

Content Modification

Block	Modification	Justification
RK4	Added "and equipment".	Both tools and equipment are important here.

Course Plan	Skill Sheet	Task Book
Fire Investigator 1B: Evidence, Documentation,	N/A	Fire Investigator (2022)
Interviews, and Wildland (2022)		Certification Task Book
Topic 3-1		• JPR 14

4-3: Selecting Evidence for Analysis

Authority

- 1. NFPA 1033: Standard for Professional Qualifications for Fire Investigator (2022)
 - Paragraph 4.4.3

Job Performance Requirement

Select evidence for analysis, given all information from the investigation, so the items for analysis support specific investigation needs.

Requisite Knowledge

- 1. Explain purposes for submitting items for analysis
- 2. Identify types of analytical services available
- 3. Describe capabilities and limitations of the services performing the analysis

Requisite Skills

1. Evaluate fire incident to determine forensic, engineering, or laboratory needs

Content Modification

Block	Modification	Justification

Course Plan	Skill Sheet	Task Book
Fire Investigator 1B: Evidence, Documentation,	N/A	Fire Investigator (2022)
Interviews, and Wildland (2022)		Certification Task Book
• Topic 3-3		• JPR 15

4-4: Maintaining a Chain of Custody

Authority

- 1. NFPA 1033: Standard for Professional Qualifications for Fire Investigator (2022)
 - Paragraph 4.4.4

Job Performance Requirement

Maintain a chain of custody, given standard investigative tools, marketing tools, and evidence tags or logs so that written documentation exists for each piece of evidence and evidence is secured.

Requisite Knowledge

- 1. Describe the rules of custody and transfer procedures
- 2. Identify types of evidence (e.g., physical evidence obtained at the scene, photos, and documents)
- 3. Describe methods of recording the chain of custody

Requisite Skills

- 1. Execute the chain of custody procedures
- 2. Accurately complete necessary documents

Content Modification

Block	Modification	Justification

Course Plan	Skill Sheet	Task Book
Fire Investigator 1B: Evidence, Documentation,	N/A	Fire Investigator (2022)
Interviews, and Wildland (2022)		Certification Task Book
• Topic 3-4		• JPR 16

4-5: Disposing of Evidence

Authority

- 1. NFPA 1033: Standard for Professional Qualifications for Fire Investigator (2022)
 - Paragraph 4.4.5
- 2. Office of the State Fire Marshal

Job Performance Requirement

Dispose of evidence, given jurisdictional or agency regulations and file information, so that the disposal is timely, safely conducted, and in compliance with jurisdictional or agency requirements.

Requisite Knowledge

- 1. Discuss judicial or statutory requirements for disposal
- 2. Identify disposal services available
- 3. Describe common disposal procedures and problems

Requisite Skills

1. Demonstrate documentation skills

Content Modification

Block	Modification	Justification
RK1	Added "Discuss judicial or	The JPR includes this as part of the task standard
	statutory requirements for	so there needs to be teaching time dedicated to
	disposal".	the concept.t.
RS1	Added "Demonstrate".	NFPA did not provide a verb.

Course Plan	Skill Sheet	Task Book
Fire Investigator 1B: Evidence, Documentation,	N/A	Fire Investigator (2022)
Interviews, and Wildland (2022)		Certification Task Book
• Topic 3-6		• JPR 17

Section 5: Interview

5-1: Developing an Interview Plan

Authority

- 1. NFPA 1033: Standard for Professional Qualifications for Fire Investigator (2022)
 - Paragraph 4.5.1

Job Performance Requirement

Develop an interview plan, given no special tools or equipment, so that the plan reflects a strategy to further determine the fire cause and affix responsibility and includes a relevant questioning strategy for each individual to be interviewed that promotes the efficient use of the investigator's time.

Requisite Knowledge

- 1. Identify persons who can provide information that furthers the fire cause determination or the affixing of responsibility
- 2. Determine types of questions that are pertinent and efficient to ask of different information sources (first responders, neighbors, witnesses, suspects, and so forth)
- 3. Discuss pros and cons of interviews versus document gathering

Requisite Skills

- 1. Demonstrate planning skills
- 2. Develop focused questions for specific individuals
- 3. Evaluate existing file data to help develop questions and fill investigative gaps

Content Modification

Block	Modification	Justification
RS1	Added "Demonstrate".	NFPA did not provide a verb.

Course Plan	Skill Sheet	Task Book
Fire Investigator 1B: Evidence, Documentation,	N/A	Fire Investigator (2022)
Interviews, and Wildland (2022)		Certification Task Book
Topic 3-7		• JPR 18

5-2: Conducting an Interview

Authority

- 1. NFPA 1033: Standard for Professional Qualifications for Fire Investigator (2022)
 - Paragraph 4.5.2

Job Performance Requirement

Conduct interviews, given incident information, so that pertinent information is obtained, follow-up questions are asked, responses to all questions are elicited, and the response to each question is documented accurately.

Requisite Knowledge

- 1. Identify types of interviews
- 2. Describe legal requirements for interviews
- 3. Describe personal identifying information needed for proper documentation or follow-up
- 4. Describe documenting methods and tools
- 5. Describe types of verbal and nonverbal communications and their meaning

Requisite Skills

- 1. Adjust interviewing approach based on deductive reasoning
- 2. Apply appropriate legal requirements
- 3. Demonstrate active listening skills

Content Modification

Block	Modification	Justification
RK2	Added "Describe legal	Information obtained in interviews is only
	requirements for interviews".	admissible in court if the interviews follow legal
		requirements. Need to include teaching on this
		point.
RK3	Added "identifying".	This is important for clarity.
RK5	Added "verbal and".	Both verbal and nonverbal communication are
		important in this topic.
RS	Removed "Interpret and analyze	The skill and nuance required to do this effectively
	verbal and nonverbal	exceeds the scope of this course.
	communications".	
RS1	Changed "strategies" to	"Strategy" implies interrogation.
	"approach".	
RS3	Changed "Exhibit strong" to	"Demonstrate" is more precise and "active" is a
	"Demonstrate active."	type of listening rather than a judgment of the
		listener's ability.

Course Plan	Skill Sheet	Task Book
Fire Investigator 1B: Evidence, Documentation,	N/A	Fire Investigator (2022)
Interviews, and Wildland (2022)		Certification Task Book
• Topic 3-8		• JPR 19

5-3: Evaluating Interview Information

Authority

- 1. NFPA 1033: Standard for Professional Qualifications for Fire Investigator (2022)
 - Paragraph 4.5.3

Job Performance Requirement

Evaluate interview information, given interview transcripts or notes and incident data, so that all interview data is individually analyzed and correlated with all other interviews, corroborative and conflictive information is documented, and new leads are developed.

Requisite Knowledge

- 1. Describe types of interviews
- 2. Describe how to evaluate interview information
- 3. Identify data correlation methods

Requisite Skills

- 1. Demonstrate data correlation skills
- 2. Evaluate source information (e.g., first responders and other witnesses)

Content Modification

Block	Modification	Justification
RK2	Changed "Describe report evaluation methods" to "Describe	Change clarifies
	how to evaluate interview information".	intent.
RS1	Added "Demonstrate".	NFPA did not
		provide a verb.

Course Plan	Skill Sheet	Task Book
Fire Investigator 1B: Evidence,	N/A	Fire Investigator (2022)
Documentation, Interviews, and Wildland		Certification Task Book
(2022)		• JPR 20
 Topic 3-8 (RK1) 		
 Topic 3-9 (RK2, RK3, RS1, RS2) 		

Section 6: Wildland Fire Investigation

6-1: Wildland Fire Investigator Roles and Responsibilities

Authority

1. Office of the State Fire Marshal

Job Performance Requirement

Describe the roles and responsibilities of a fire investigator, given an actual or simulated wildland fire incident, to safely identify, secure, and protect the areas of origin.

Requisite Knowledge

- 1. Identify importance of determining jurisdictional responsibility for investigation
- 2. Identify basic responsibilities of a fire investigator at a wildland scene
- 3. Discuss the systematic method of investigating a wildfire
- 4. Identify equipment specific to a wildland investigation
- 5. Identify Personal Protective Equipment (PPE)

Requisite Skills

1. None

Content Modification

Block	Modification	Justification
CTS	Added a new	Wildland fires are prevalent in California, and all fire
	standard.	investigators working in the state need this skill.

Course Plan	Skill Sheet	Task Book
Fire Investigator 1B: Evidence, Documentation,	N/A	N/A
Interviews, and Wildland (2022)		
• Topic 4-1		

6-2: Documenting a Wildland Fire Scene

Authority

1. Office of the State Fire Marshal

Job Performance Requirement

Assist with documenting a wildland fire scene, given a simulated or actual wildland fire incident, to accurately represent the scene and identify evidence, pertinent contents, significant patterns, and area(s) or point(s) of origin.

Requisite Knowledge

- 1. Describe documenting a wildfire scene
- 2. Discuss outside influences on a wildland scene
- 3. Describe how to gather digital media
- 4. Identify and interview witnesses
- 5. Describe how to collect and documents on-scene weather readings

Requisite Skills

- 1. Demonstrate data-reduction skills
- 2. Demonstrate note-taking skills
- 3. Use cameras and accessories
- 4. Demonstrate observational and correlational skills

Content Modification

Block	Modification	Justification
CTS	Added a new	Wildland fires are prevalent in California, and all fire
	standard.	investigators working in the state need this skill.

Course Plan	Skill Sheet	Task Book
Fire Investigator 1B: Evidence, Documentation,	N/A	Fire Investigator (2022)
Interviews, and Wildland (2022)		Certification Task Book
• Topic 4-2		• JPR 21

6-3: Identifying Origin Areas

Authority

1. Office of the State Fire Marshal

Job Performance Requirement

Assist with identifying the origin areas, given an actual or simulated wildland fire incident, so that the opinion regarding origin is supported by the data, facts, and evidence.

Requisite Knowledge

- 1. Describe what influences wildland fire behavior
- 2. Describe parts of a wildland fire
- 3. Identify and describe fire direction indicators
- 4. Describe the relationship between individual indicators and overall fire pattern(s), which may reveal overall fire progression
- 5. Discuss indicator flags and their use

Requisite Skills

1. Demonstrate analytical and assimilation skills

Content Modification

Block	Modification	Justification
CTS	Added a new	Wildland fires are prevalent in California, and all fire
	standard.	investigators working in the state need this skill.

Course Plan	Skill Sheet	Task Book
Fire Investigator 1B: Evidence, Documentation,	N/A	Fire Investigator (2022)
Interviews, and Wildland (2022)		Certification Task Book
• Topic 4-3		• JPR 22

6-4: Identifying Wildland Fire Ignition Source and Cause

Authority

1. Office of the State Fire Marshal

Job Performance Requirement

Assist with identifying the ignition source and cause of a wildland fire, given an actual or simulated wildland fire scene, so that what brought the ignition source and materials together is determined.

Requisite Knowledge

1. Identify categories of fire causes and ignition sources

Requisite Skills

1. Employ search techniques

Content Modification

Block	Modification	Justification
CTS	Added a new	Wildland fires are prevalent in California, and all fire
	standard.	investigators working in the state need this skill.

Course Plan	Skill Sheet	Task Book
Fire Investigator 1B: Evidence, Documentation,	N/A	Fire Investigator (2022)
Interviews, and Wildland (2022)		Certification Task Book
Topic 4-4		• JPR 23

6-5: Working with Wildland Fire Evidence

Authority

1. Office of the State Fire Marshal

Job Performance Requirement

Assist with locating, photographing, documenting, and protecting wildland fire evidence, given an actual or simulated wildland fire scene, so that evidence is properly identified, preserved, collected, packaged, and stored for use in testing, legal, or other proceedings and examinations.

Requisite Knowledge

- 1. Describe how evidence is located and identified at a wildland fire scene
- 2. Identify equipment and vehicle use evidence
- 3. Identify any evidence of firearms use
- 4. Identify fireworks evidence
- 5. Identify evidence related to power generation, transmission, or distribution
- 6. Identify incendiary evidence

Requisite Skills

- 1. Recognize different types of evidence
- 2. Determine whether evidence is critical to the investigation

Content Modification

Block	Modification	Justification
CTS	Added a new	Wildland fires are prevalent in California, and all fire
	standard.	investigators working in the state need this skill.

Course Plan	Skill Sheet	Task Book
Fire Investigator 1B: Evidence, Documentation,	N/A	Fire Investigator (2022)
Interviews, and Wildland (2022)		Certification Task Book
• Topic 4-5		• JPR 24

Section 7: Post-Incident Investigation

7-1: Gathering Reports and Records

Authority

- 1. NFPA 1033: Standard for Professional Qualifications for Fire Investigator (2022)
 - Paragraph 4.6.1

Job Performance Requirement

Gather reports and records, given no special tools, equipment, or materials, so that all gathered documents are applicable to the investigation, complete, and authentic; the chain of custody is maintained; and the material is admissible in a legal proceeding.

Requisite Knowledge

- 1. Describe types of reports and records needed that facilitate determining responsibility for the fire (e.g., police reports, fire reports, insurance policies, financial records, deeds, private investigator reports, outside photos, and videos)
- 2. Identify location of reports and records

Requisite Skills

- 1. Identify reports and documents necessary for the investigation
- 2. Implement chain of custody
- 3. Demonstrate organizational skills

Content Modification

Block	Modification	Justification
RK1	Added "and records".	Changed to match JPR.
RK2	Added "and records".	Changed to match JPR.
RS3	Added "Demonstrate".	NFPA did not provide a verb.

Course Plan	Skill Sheet	Task Book
Fire Investigator 1C: Preparation for Legal	N/A	Fire Investigator (2022)
Proceedings (2022)		Certification Task Book
Topic 2-1		• JPR 28

7-2: Evaluating the Investigative File

Authority

- 1. NFPA 1033: Standard for Professional Qualifications for Fire Investigator (2022)
 - Paragraph 4.6.2

Job Performance Requirement

Evaluate the investigative file, given all available file information, so that areas for further investigation are identified, the relationship between gathered documents and information is interpreted, and corroborative evidence and information discrepancies are discovered.

Requisite Knowledge

- 1. Describe file assessment and/or evaluation methods, including accurate documentation practices
- 2. Identify requisite investigative elements

Requisite Skills

- 1. Demonstrate information assessment skills
- 2. Demonstrate correlation skills
- 3. Demonstrate organizational skills

Content Modification

Block	Modification	Justification
RS1	Added "Demonstrate".	NFPA did not provide a verb.
RS2	Added "Demonstrate".	NFPA did not provide a verb.
RS3	Added "Demonstrate".	NFPA did not provide a verb.

Course Plan	Skill Sheet	Task Book
Fire Investigator 1C: Preparation for	N/A	Fire Investigator (2022) Certification
Legal Proceedings (2022)		Task Book
Topic 2-2		• JPR 29

7-3: Coordinating Expert Resources

Authority

- 1. NFPA 1033: Standard for Professional Qualifications for Fire Investigator (2022)
 - Paragraph 4.6.3

Job Performance Requirement

Coordinate expert resources, given the investigative file, reports, and documents, so that the expert's competencies are matched to the specific investigation needs, financial expenditures are justified, and utilization clearly furthers the investigative goals of determining cause or affixing responsibility.

Requisite Knowledge

- 1. Describe how to assess one's own expertise
- 2. Identify qualifications to be called for expert testimony
- 3. Identify types of expert resources (e.g., forensic, CPA, polygraph, financial, human behavior disorders, and engineering)
- 4. Describe methods to identify expert resources

Requisite Skills

- 1. Apply expert resources to further the investigation
- 2. Network with other investigators to identify expert resources
- 3. Question experts relative to their qualifications
- 4. Develop a utilization plan for use of expert resources

Content Modification

Block	Modification	Justification
RS2	Added	Adding this keeps it consistent with the wording in the rest of
	"resources".	the topic.

Course Plan	Skill Sheet	Task Book
Fire Investigator 1C: Preparation for Legal	N/A	Fire Investigator (2022)
Proceedings (2022)		Certification Task Book
• Topic 2-3		• JPR 30

7-4: Establishing Evidence as to Means, Motive, and Opportunity

Authority

- 1. NFPA 1033: Standard for Professional Qualifications for Fire Investigator (2022)
 - Paragraph 4.6.4

Job Performance Requirement

Establish evidence as to means, motive, and opportunity, given an incendiary fire, so that the evidence is supported by documentation and meets the evidentiary requirements of the jurisdiction.

Requisite Knowledge

- 1. Identify means common to incendiary fires
- 2. Discuss types of motives common to incendiary fires
- 3. Identify methods used to discovery opportunity
- 4. Discuss human behavioral patterns relative to fire-setting

Requisite Skills

- 1. Analyze finances and other records
- 2. Perform an interview
- 3. Interpret and analyze fire scene information and evidence for relationship to means, motive, and opportunity

Content Modification

Block	Modification	Justification
JPR	Changed "motive and/or opportunity" to	"Means" is an important part of
	"means, motives, and opportunity".	this discussion.
RK1	Added new RK item.	This change matches the revised
		JPR.
RS1	Replaced "Financial analysis, records gathering	The documents have already been
	and analysis" with "Analyze finances and other	gathered and this is cleaner
	records".	wording.
RS2	Added "Perform".	NFPA did not provide a verb.
RS3	Changed "motive and/or opportunity" to	Changed to match JPR.
	"means, motives, and opportunity".	

Course Plan	Skill Sheet	Task Book
This is covered by CFITrainer. It is not in	N/A	Fire Investigator (2022) Certification
an SFT course plan.		Task Book
		• JPR 31

7-5: Formulating an Opinion

Authority

- 1. NFPA 1033: Standard for Professional Qualifications for Fire Investigator (2022)
 - Paragraph 4.6.5

Job Performance Requirement

Formulate an opinion concerning origin, cause, or responsibility for the fire, given all investigative findings, so that the opinion regarding origin, cause, or responsibility for a fire is supported by the data, facts, records, reports, documents, scientific references, and evidence.

Requisite Knowledge

1. Describe analytical methods and procedures (e.g., hypothesis development and testing, systems analysis, time lines, link analysis, fault tree analysis, and data reduction matrixing)

Requisite Skills

1. Demonstrate analytical and assimilation skills

Content Modification

Block	Modification	Justification
RS1	Added "Demonstrate".	NFPA did not provide a verb.

Course Plan	Skill Sheet	Task Book
Fire Investigator 1C: Preparation for Legal	N/A	Fire Investigator (2022)
Proceedings (2022)		Certification Task Book
• Topic 2-4		• JPR 32

Section 8: Presentations

8-1: Preparing a Written Report

Authority

- 1. NFPA 1033: Standard for Professional Qualifications for Fire Investigator (2022)
 - Paragraph 4.7.1

Job Performance Requirement

Prepare a written report, given investigative findings, so that the report accurately reflects the facts, data, and scientific principles on which the investigator relied; clearly identifies and expresses the investigator's opinions and conclusions; and contains the reasoning by which each opinion or conclusion was reached in order to meet the requirements of the intended audience(s).

Requisite Knowledge

- 1. Describe elements of writing
- 2. Describe typical components of a written report
- 3. Identify types of audiences and their respective needs or requirements

Requisite Skills

- 1. Demonstrate writing skills
- 2. Analyze information
- 3. Determine audiences and their respective needs or requirements

Content Modification

Block	Modification	Justification
RS1	Added "Demonstrate".	NFPA didn't provide a verb.
RS3	Changed "readers' needs or requirements" to "audiences and their respective needs or requirements".	This change matches the language of the rest of the topic.

Course Plan	Skill Sheet	Task Book
Fire Investigator 1B: Evidence, Documentation,	N/A	Fire Investigator (2022)
Interviews, and Wildland (2022)		Certification Task Book
• Topic 3-5		• JPR 33

8-2: Expressing Investigative Findings

Authority

- 1. NFPA 1033: Standard for Professional Qualifications for Fire Investigator (2022)
 - Paragraph 4.7.2

Job Performance Requirement

Express investigative findings verbally, given investigative findings, notes, a time allotment, and a specific audience, so that the information is accurate, the presentation is completed within the allotted time, and the presentation includes only need-to-know information for the intended audience.

Requisite Knowledge

- 1. Identify types of investigative findings
- 2. Identify informational needs of various types of audiences
- 3. Describe the impact of releasing information

Requisite Skills

- 1. Demonstrate communication skills
- 2. Determine audience needs
- 3. Correlate findings

Content Modification

Block	Modification	Justification
RS1	Added "Demonstrate".	NFPA did not provide a verb.

Course Plan	Skill	Task Book
	Sheet	
Fire Investigator 1C: Preparation for Legal	N/A	Fire Investigator (2022)
Proceedings (2022)		Certification Task Book
Topic 2-5		• JPR 34

8-3: Testifying During Legal Proceedings

Authority

- 1. NFPA 1033: Standard for Professional Qualifications for Fire Investigator (2022)
 - Paragraph 4.7.3

Job Performance Requirement

Testify during legal proceedings, given investigative findings, so that the testimony accurately reflects the facts, data, and scientific principles on which the investigator relied; clearly identifies and expresses the investigator's opinions and conclusions; and contains the reasoning by which each opinion or conclusion was reached.

Requisite Knowledge

- 1. Identify types of findings within the investigative file
- 2. Describe types of legal proceedings
- 3. Describe professional demeanor requirements

Requisite Skills

- 1. Demonstrate communication and listening skills
- 2. Differentiate facts from opinion
- 3. Determine accepted procedures, practices, and etiquette during legal proceedings

Content Modification

Block	Modification	Justification
RK1	Added "within the investigative file".	Added to narrow cope of "of
		findings".
RK4	Removed "an understanding of".	Adjusted for grammar.

Course Plan	Skill	Task Book
	Sheet	
Fire Investigator 1C: Preparation for Legal	N/A	Fire Investigator (2022)
Proceedings (2022)		Certification Task Book
• Topic 2-6		• JPR 35