

Fire Investigation: Fire as a Weapon

FI: FW-Student Manual

2nd Edition, 2nd Printing-October 2024



FEMA

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2nd Edition, 2nd Printing

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Acronyms

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ACKNOWLEDGMENTS

The development of any National Fire Academy (NFA) course is a complex process aimed at providing students with the best possible learning opportunity we can deliver.

There are many players in course development, each of whom plays an equally important part in its success. We want to acknowledge their participation and contribution to this effort and extend our heartfelt thanks for making this quality product.

The following people participated in the creation of this course:

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COURSE DESCRIPTION

This 2-day course presents a basic overview of how fire is used as a weapon. This includes an overview of the history of arson, motivating factors behind intentional firesetting, and how firefighters and first-arriving law enforcement can assist fire investigators through the actions they take at the fire scene. The course will stress the concept of first responders as an integral part of fire investigation and will cover basics for active listening; interviewing; and recognizing, preserving and collecting (when absolutely necessary) potential evidence.

COURSE GOAL

The goal of this course is to aid first responders in understanding and recognizing how fire can be used as a weapon against people and/or property. This course should also help first responders and investigators understand why a person would choose to use fire as a weapon.

AUDIENCE, SCOPE AND COURSE PURPOSE

The target audience for “Fire Investigation: Fire as a Weapon” (FI: FW) is fire and emergency service personnel who respond to fires or who might conduct preliminary investigations into the origin and cause of fires.

The scope of this course includes the historical use of fire as a weapon and the motivations that lead individuals to use fire as a weapon. It also includes providing first responders and new fire investigators with knowledge they need to gather information that will aid in the investigation of a fire and to recognize, preserve and, when necessary, collect evidence at the fire scene.

The purpose of this course is to instill in first responders the understanding that they play a key role in investigating and in preserving and protecting important evidence for any criminal investigation. The content of the course will provide a clear definition of the role of the first responder and identify the preservation and protection of evidence and proper reporting of information to appropriate officials. By strengthening the partnership between first responders and investigators, the chances for successfully solving arson-related crimes will increase.

GRADING METHODOLOGY

The students’ final grades will be computed using the final exam. The final exam will include 20 multiple-choice questions. The exam covers all information in the Student Manual (SM), as well as the concepts presented during presentations and class discussions.

Grade	Percentage range
A	90-100%
B	80-89%
C	70-79%
F	69% or less

Passing is a C (70%).

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FIRE INVESTIGATION: FIRE AS A WEAPON

SCHEDULE

TIME	DAY 1	DAY 2
8:00 – 9:00	Introduction, Welcome and Administrative	Unit 3: Vital Information From First Responders
9:00 – 9:10	<i>Break</i>	<i>Break</i>
9:10 – 10:20	Unit 1: Historical Use of Fire as a Weapon	Unit 3: Vital Information From First Responders (cont'd)
10:20 – 10:30	<i>Break</i>	<i>Break</i>
10:30 – 12:00	Unit 1: Historical Use of Fire as a Weapon (cont'd)	Activity 3.1: Observing the Fire Scene for Clues and Gathering Information
12:00 – 1:00	<i>Lunch Break</i>	<i>Lunch Break</i>
1:00 – 2:15	Unit 2: Why People Use Fire as a Weapon (Motives and Methods)	Unit 4: Evidence
2:15 – 2:30	<i>Break</i>	<i>Break</i>
2:30 – 5:00	Unit 2: Why People Use Fire as a Weapon (Motives and Methods) (cont'd) Activity 2.1: Determining Possible Motivation	Unit 4: Evidence (cont'd) Activity 4.1: Recognizing, Preserving and Collecting Evidence at a Fire Scene Final Exam and Course Wrap-up

Note: This schedule is subject to modification by the instructors and approved by the training specialist.

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FIREFIGHTER CODE OF ETHICS

Background

The Fire Service is a noble calling, one which is founded on mutual respect and trust between firefighters and the citizens they serve. To ensure the continuing integrity of the Fire Service, the highest standards of ethical conduct must be maintained at all times.

Developed in response to the publication of the Fire Service Reputation Management White Paper, the purpose of this National Firefighter Code of Ethics is to establish criteria that encourages fire service personnel to promote a culture of ethical integrity and high standards of professionalism in our field. The broad scope of this recommended Code of Ethics is intended to mitigate and negate situations that may result in embarrassment and waning of public support for what has historically been a highly respected profession.

Ethics comes from the Greek word ethos, meaning character. Character is not necessarily defined by how a person behaves when conditions are optimal and life is good. It is easy to take the high road when the path is paved and obstacles are few or non-existent. Character is also defined by decisions made under pressure, when no one is looking, when the road contains land mines, and the way is obscured. As members of the Fire Service, we share a responsibility to project an ethical character of professionalism, integrity, compassion, loyalty and honesty in all that we do, all of the time.

We need to accept this ethics challenge and be truly willing to maintain a culture that is consistent with the expectations outlined in this document. By doing so, we can create a legacy that validates and sustains the distinguished Fire Service institution, and at the same time ensure that we leave the Fire Service in better condition than when we arrived.



FIREFIGHTER CODE OF ETHICS

I understand that I have the responsibility to conduct myself in a manner that reflects proper ethical behavior and integrity. In so doing, I will help foster a continuing positive public perception of the fire service. Therefore, I pledge the following...

- Always conduct myself, on and off duty, in a manner that reflects positively on myself, my department and the fire service in general.
- Accept responsibility for my actions and for the consequences of my actions.
- Support the concept of fairness and the value of diverse thoughts and opinions.
- Avoid situations that would adversely affect the credibility or public perception of the fire service profession.
- Be truthful and honest at all times and report instances of cheating or other dishonest acts that compromise the integrity of the fire service.
- Conduct my personal affairs in a manner that does not improperly influence the performance of my duties, or bring discredit to my organization.
- Be respectful and conscious of each member's safety and welfare.
- Recognize that I serve in a position of public trust that requires stewardship in the honest and efficient use of publicly owned resources, including uniforms, facilities, vehicles and equipment and that these are protected from misuse and theft.
- Exercise professionalism, competence, respect and loyalty in the performance of my duties and use information, confidential or otherwise, gained by virtue of my position, only to benefit those I am entrusted to serve.
- Avoid financial investments, outside employment, outside business interests or activities that conflict with or are enhanced by my official position or have the potential to create the perception of impropriety.
- Never propose or accept personal rewards, special privileges, benefits, advancement, honors or gifts that may create a conflict of interest, or the appearance thereof.
- Never engage in activities involving alcohol or other substance use or abuse that can impair my mental state or the performance of my duties and compromise safety.
- Never discriminate on the basis of race, religion, color, creed, age, marital status, national origin, ancestry, gender, sexual preference, medical condition or handicap.
- Never harass, intimidate or threaten fellow members of the service or the public and stop or report the actions of other firefighters who engage in such behaviors.
- Responsibly use social networking, electronic communications, or other media technology opportunities in a manner that does not discredit, dishonor or embarrass my organization, the fire service and the public. I also understand that failure to resolve or report inappropriate use of this media equates to condoning this behavior.

Developed by the National Society of Executive Fire Officers

A Student Guide to End-of-course Evaluations

Say What You Mean ...

Ten Things You Can Do to Improve the National Fire Academy

The National Fire Academy takes its course evaluations very seriously. Your comments and suggestions enable us to improve your learning experience.

Unfortunately, we often get end-of-course comments like these that are vague and, therefore, not actionable. We know you are trying to keep your answers short, but the more specific you can be, the better we can respond.



Actual quotes from student evaluations:	Examples of specific, actionable comments that would help us improve the course:
1 "Update the materials."	<ul style="list-style-type: none"> The (ABC) fire video is out-of-date because of the dangerous tactics it demonstrates. The available (XYZ) video shows current practices. The student manual references building codes that are 12 years old.
2 "We want an advanced class in (fill in the blank)."	<ul style="list-style-type: none"> We would like a class that enables us to calculate energy transfer rates resulting from exposure fires. We would like a class that provides one-on-one workplace harassment counseling practice exercises.
3 "More activities."	<ul style="list-style-type: none"> An activity where students can physically measure the area of sprinkler coverage would improve understanding of the concept. Not all students were able to fill all ICS positions in the exercises. Add more exercises so all students can participate.
4 "A longer course."	<ul style="list-style-type: none"> The class should be increased by one hour per day to enable all students to participate in exercises. The class should be increased by two days so that all group presentations can be peer evaluated and have written abstracts.
5 "Readable plans."	<ul style="list-style-type: none"> The plans should be enlarged to 11 by 17 and provided with an accurate scale. My plan set was blurry, which caused the dotted lines to be interpreted as solid lines.
6 "Better student guide organization," "manual did not coincide with slides."	<ul style="list-style-type: none"> The slide sequence in Unit 4 did not align with the content in the student manual from slides 4-16 through 4-21. The instructor added slides in Unit 4 that were not in my student manual.
7 "Dry in spots."	<ul style="list-style-type: none"> The instructor/activity should have used student group activities rather than lecture to explain Maslow's Hierarchy. Create a pre-course reading on symbiotic personal relationships rather than trying to lecture on them in class.
8 "More visual aids."	<ul style="list-style-type: none"> The text description of V-patterns did not provide three-dimensional views. More photographs or drawings would help me imagine the pattern. There was a video clip on NBC News (date) that summarized the topic very well.
9 "Re-evaluate pre-course assignments."	<ul style="list-style-type: none"> The pre-course assignments were not discussed or referenced in class. Either connect them to the course content or delete them. The pre-course assignments on ICS could be reduced to a one-page job aid rather than a 25-page reading.
10 "A better understanding of NIMS."	<ul style="list-style-type: none"> The instructor did not explain the connection between NIMS and ICS. The student manual needs an illustrated guide to NIMS.

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UNIT 1: HISTORICAL USE OF FIRE AS A WEAPON

TERMINAL OBJECTIVE

The students will be able to:



- 1.1 *Explain how fire has been used as a weapon historically in the United States.*

ENABLING OBJECTIVES

The students will be able to:

- 1.1 *Describe significant arson cases in the United States.*
 - 1.2 *Discuss the analysis of arson cases in the United States.*
-

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**UNIT 1:
HISTORICAL USE OF FIRE
AS A WEAPON**

Slide 1-1

TERMINAL OBJECTIVE

Explain how fire has been used as a weapon historically in the United States.




Photo courtesy of iStock.

Slide 1-2

ENABLING OBJECTIVES

- Describe significant arson cases in the United States.
- Discuss the analysis of arson cases in the United States.

Slide 1-3

I. HISTORY OF FIRE AS A WEAPON

EARLY USES OF FIRE

- Light.
- Heat.
- Cooking.




Photo courtesy of iStock.
Slide 1-4

A. Early uses of fire.

1. From the beginnings of human civilization, fire has been used for many purposes.
 - a. Light.
 - b. Heat.
 - c. Cooking.

FARMING AND HUNTING



Photos courtesy of iStock.
Slide 1-5

2. Very early, people also discovered that fire was useful for farming and hunting.
 - a. Australian Aboriginals practiced fire-stick farming to regenerate the soil.

- Fire-stick farming is an ancient land management technique used by Indigenous peoples of Australia.
 - It involves controlled burning of the landscape to reduce fuel loads, promote new growth and maintain open areas for hunting and gathering.
- b. It was also used to drive out animals for hunting purposes.



- B. Once fire was discovered to be painful, it quickly became a weapon and criminalized.
1. At first, it was used to maliciously start fires with the intent of destroying property belonging to others.
 2. Example: Under British law, in the early 19th century, setting fire to domestic and commercial premises, and “any stack of corn, grain, pulse, straw, hay or wood,” was punishable by death. Stack-burning was removed from the list of capital crimes in 1837, but arson remained a serious offense that could incur a life sentence or banishment (Clark, 2014).
 3. Over time, the use of fire as a weapon changed, as attitudes toward criminality evolved.
 - a. Late 19th and early 20th century societies were less concerned with property damage than they were with crimes against the person.
 - b. As industrialization and urbanization increased, people began moving to the cities where they lived closer together. Murder and assault were perceived as a greater threat than property crime, and punishments for firesetting became less severe.

COLLECTIVE VIOLENCE

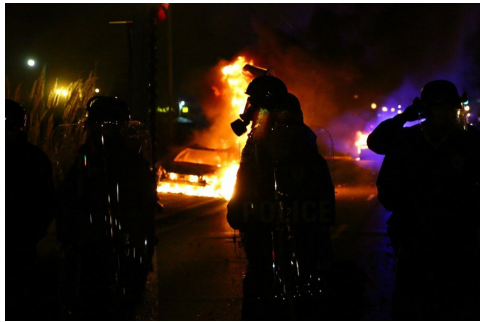


Photo courtesy of Shutterstock.

Slide 1-7

- C. The use of fire as a means of collective violence and social protest increased, however.
1. Example: In East St. Louis, in 1917, house burning played a key role in protests by white mobs against mass migration of southern Blacks into wartime factory jobs (Keyes, 2017).
 2. More recently, more than 1,000 buildings were burned or damaged following the murder of George Floyd in Minneapolis in 2020 (Eischens, 2021). To date, few charges had been filed for arson and destruction.

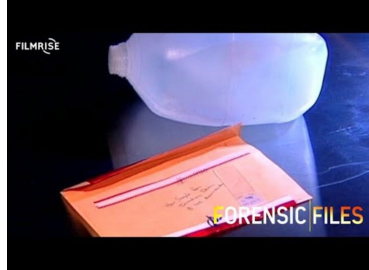
II. NATIONAL CASE STUDY 1: THOMAS SWEATT: D.C. ARSONIST



Case Study:
Thomas Sweatt:
D.C. Arsonist

Slide 1-8

VIDEO PRESENTATION
"FORENSIC FILES - SEASON 10,
EPISODE 37 - HOT ON THE TRAIL"



Video found at <https://youtu.be/PhKtJGz0eag> Forensic Files-Season 10.

Slide 1-9

**BACKGROUND OF D.C.
ARSONIST CASE**

- Multiple fires set in Washington, D.C., area.
- Targeted males exiting military base.
- Theft of military clothing and shoes.
- Fires set using plastic containers filled with gasoline and wicked with clothing.

Slide 1-10

A. Background.

1. Thomas Sweatt was a serial arsonist who set multiple fires in the Washington, D.C., area. Sweatt was responsible for at least 350 fires.
2. Thomas Sweat would locate a male victim exiting a military base. He would follow these men home. He would then break into the victims' homes and would steal military clothing and shoes before setting the fire.
3. Sweatt's method of setting the fires was by means of carrying a plastic shopping bag that contained a plastic container, like a soda bottle or milk jug, filled with gasoline. The bottles were wicked with various pieces of clothing.

B. Motives.

MOTIVES IN D.C. ARSONIST CASE

- Failed attempt to join Navy.
- Sexual fascination with men in uniform.
- Arousal through setting fires.




Photo courtesy of Shutterstock. Slide 1-11

1. Sweatt had attempted to join the Navy but was rejected because he could not pass the fitness requirements.
2. Sweatt was obsessed with Marines and had a sexual fascination with men in uniform. He was aroused by setting fires.

C. Evidence.

EVIDENCE IN D.C. ARSONIST CASE

- Remnants of milk bottles and shopping bags from a single store.
- Sketch based on witness descriptions.
- DNA extracted from hairs found at scene.
- Video surveillance images of car.




Photo courtesy of iStock. Slide 1-12

1. Remnants of milk bottles and shopping bags were found in the area of origin. The remnants of the shopping bags were discovered to be from one store.
2. Three witnesses provided a sketch of Sweatt. Hairs were found at the scene. DNA was extracted from hair found at the scenes of the fires. Video surveillance revealed Sweatt’s car in the area of the fires, which was later recovered.

3. Sweatt's DNA was taken and compared to hairs found at the scene and matched. The sketch of Sweatt was consistent with Sweatt's face at the time of his arrest.

**INVESTIGATION OF D.C.
ARSONIST CASE**

- Two-year investigation involving multiple agencies.
- Methodology:
 - Lab analysis.
 - Evidentiary profiling.
 - Evidence tracking.
 - Modus operandi tracking.
 - Public appeal.
- Confession.

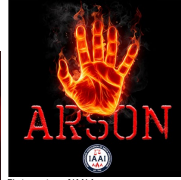
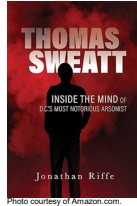
Slide 1-13

D. Investigation.

1. The Sweatt investigation lasted almost two years. Multiple agencies, including the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), were actively involved in the investigation.
2. Methods included:
 - a. Lab analysis.
 - b. Evidentiary profiling.
 - c. Evidence tracking.
 - d. Modus operandi tracking.
 - e. Public appeal.
3. Sweatt ultimately confessed to setting the fires and admitted to setting an additional 300 fires.

ADDITIONAL RESOURCES ON
D.C. ARSONIST

- For more information on the D.C. arsonist, listen to the International Association of Arson Investigators (IAAI) podcast Arson at <https://iaaiarson.com/>.
- Other resources include “Thomas Sweatt: Inside the Mind of DC’s Most Notorious Arsonist” by Jonathan Riffe.



Slide 1-14

4. Additional information.

- a. For more information on the D.C. arsonist, go to the International Association of Arson Investigators (IAAI) podcast “Arson,” available at <https://iaaiarson.com/>.
- b. Other resources include the book “Thomas Sweatt: Inside the Mind of DC’s Most Notorious Arsonist” by Jonathan Riffe.

III. NATIONAL CASE STUDY 2: JOHN LEONARD ORR: FIRE CAPTAIN AND ARSONIST

Case Study:
John Leonard
Orr: Fire Captain
and Arsonist

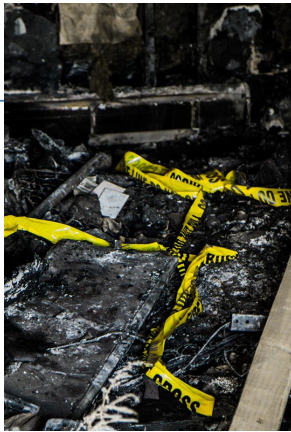
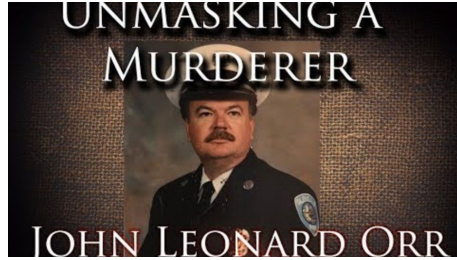


Photo courtesy of Shutterstock.

Slide 1-15

VIDEO PRESENTATION

“EPISODE 13: JOHN LEONARD ORR:
THE FIRE CAPTAIN AND ARSONIST”



BACKGROUND OF JOHN ORR
CASE

- Fire chief of Glendale Fire Department.
- Seen as peer and expert in origin/cause investigations.
- Investigators would often wait for Orr to arrive so that he could conduct the origin and cause investigation.

Slide 1-17

A. Background.

1. John Orr was a captain and eventually became chief of the Glendale Fire Department in California.
2. Orr’s peers considered him a mentor and an expert in origin and cause investigations.
3. In many cases, investigators would wait for Orr’s arrival so that he could conduct the origin and cause investigation.

B. Motives.

MOTIVES IN JOHN ORR CASE

- Vanity, ego and hero complex.
- Animosity toward law enforcement.
- Failure to obtain jobs with Los Angeles city police and fire departments.




Photo courtesy of iStock.

Slide 1-18

1. Orr’s motives were vanity, an ego-driven hero complex and an animosity toward law enforcement.
2. Investigators discovered that Orr had been turned down for jobs in both the Los Angeles Police Department and the Los Angeles Fire Department. Orr could not pass the psychological exams.

C. Evidence.

EVIDENCE IN JOHN ORR CASE

- Fingerprint on incendiary device found at scene.
- Written manifesto.




Photo courtesy of Barry Grimm.

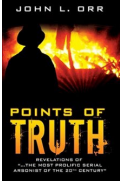


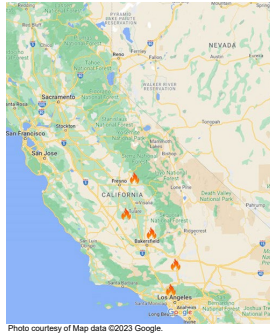
Photo courtesy of Amazon.com.

Slide 1-19

1. A fingerprint was found on an incendiary device (a matchbook with a cigarette attached), which was collected as evidence at one of the fire scenes.
2. Written manifesto.

INVESTIGATION OF JOHN ORR CASE

- Task force formed.
- Chronological and geographical tracking.
- Fingerprint analysis.
- Search of suspect's residence.
- Manuscript containing incriminating details.



Slide 1-20

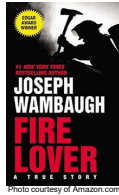
D. Investigation.

1. Investigators formed a task force to work on the arsons as a team.
2. Investigators conducted chronological and geographical tracking, because investigators determined that these major fires were started during arson conferences in that area.
3. Fingerprint analysis was conducted on the print found at one of the major fire scenes. It was found to belong to John Orr.
4. A criminal search warrant was executed on Orr's residence. During the search, a manuscript was found containing a movie script written by John Orr. The script included details from active criminal investigations that the task force was investigating.
5. Investigators found evidence in the manuscript consistent with statements made by victims just prior to the fire being reported, which Orr should not have known about. Investigators determined Orr would have had to be in the store before the fire to hear the statements.

- E. Orr is serving a life sentence for the fires. To this day, Orr maintains his innocence and states that the arsonist is still at large.

ADDITIONAL INFORMATION ON JOHN ORR INVESTIGATION

- For more information on the John Orr investigation, listen to the podcast “Firebug” by Kary Antholis at <https://truth.media/firebug>.
- Other resources include “Fire Lover” by Joseph Wambaugh.



Slide 1-21

F. Additional resources.

1. For more information about this case, consider listening to the “Firebug” podcast by Kary Antholis at <https://truth.media/firebug>.
2. You may also enjoy reading “Fire Lover” by Joseph Wambaugh.

IV. REASONS TO STUDY ARSON

REASONS TO STUDY ARSON



Photo courtesy of Shutterstock

Slide 1-22

THE IMPACT OF ARSON

- Fire departments battle 52,260 intentionally set structure fires each year.
- Arson causes \$815 million in direct property damage annually.
- On average, 400 civilians die every year due to arson.

Slide 1-23

- A. The impact of arson. Historically, arson has been the cause of billions of dollars of property damage in the United States.
 1. Municipal fire departments in the United States responded to an estimated annual average of 52,260 intentionally set structure fires in the five-year period from 2014 to 2018 (National Fire Protection Association (NFPA), 2021).
 2. These fires caused an estimated \$815 million in direct property damage each year (NFPA, 2021).
 3. Arson endangers lives.
 4. Each year, from 2014-2018, an average of 400 civilians were reported killed each year in intentionally set fires (NFPA, 2021).
 5. Arson brings terror and a sense of insecurity to neighborhoods.
 6. Arson affects all socioeconomic groups, regardless of race, creed or religion.

THE ACCESSIBILITY OF ARSON

- Fire is the “poor man’s gun.”
- It requires little effort and few tools.



Photo courtesy of iStock.

Slide 1-24

B. Accessibility.

1. Fire is the “poor man’s gun.”
2. Setting a fire requires little effort and few tools.

MOLOTOV COCKTAILS

- One of the most used incendiary devices.
- Use goes back to seventh century.
- Simple construction.

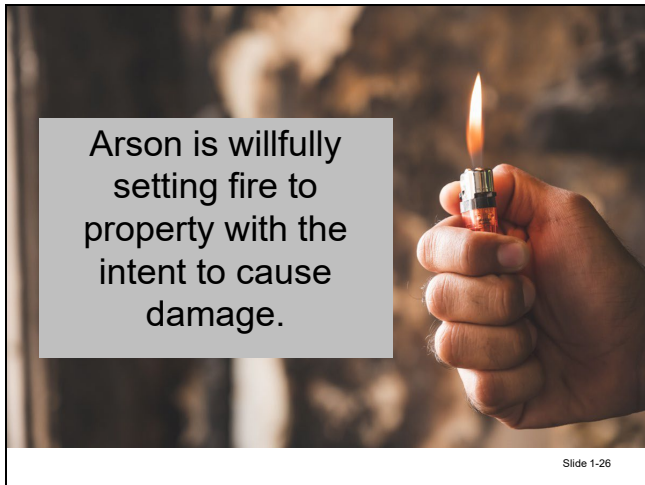


Photo courtesy of Eneés De Troya, CC 2.0.

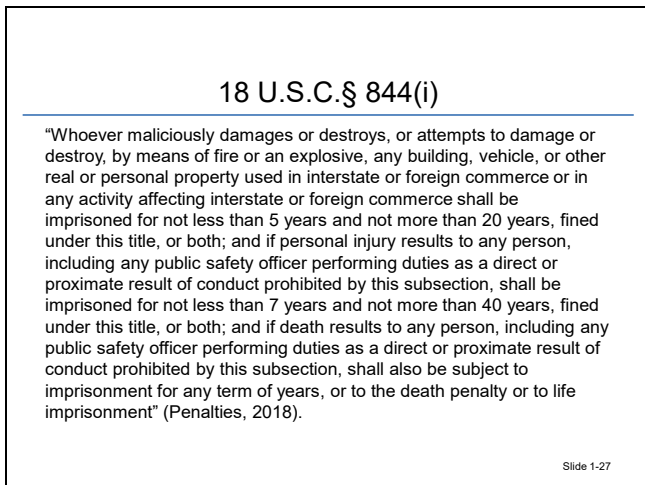
Slide 1-25

3. Molotov cocktails.
 - a. These are one of the most commonly used incendiary devices in the world.
 - b. Historical use goes back to the seventh century, and they are still used today.
 - c. Its simple construction has not changed since its invention. It is made from a glass bottle, which is filled with an ignitable liquid, such as gasoline, paint thinner or alcohol, and wicked with a piece of fabric. The wick is ignited and thrown from a distance into a target.

C. Arson as a crime.



1. The willful act of setting fire to property with the intent to cause damage is called arson, and it is a crime.
2. Some people mistakenly believe that arson is a federal crime only if it involves federal property, but this is not true.
3. First responders need to be aware of this so that they know to notify federal authorities about possible arson incidents that fall within federal jurisdiction.



- d. Fires increase insurance rates across the country.
2. Youth firesetting.
- a. Youth firesetting, while not the leading cause of fire in most communities, remains an expensive, dangerous and often fatal threat in America. For years, national statistics show youth-set fires to account annually for over 50% of intentionally set fires in our country.
 - b. Curiosity-motivated firesetting is the leading cause of fire initiated by younger children, age 7 and below. Factors influencing these fires are the lack of effective fire safety education, absent adult supervision and easy access to ignition materials. Most curiosity-motivated firesetting can be effectively mitigated by a good fire safety program aimed at not only the child, but adult care providers as well.
 - c. A rapidly growing factor contributing to crisis-motivated firesetting is exposure to adverse childhood experiences (ACEs) such as family dysfunction, absent parents, verbal/physical/sexual abuse, bullying and exposure to violence. Arguably, ACEs are one of the leading factors contributing to complex firesetting situations which can involve children/youth of any age. Comprehensive intervention from trained behavioral/mental health professionals is critical to addressing these situations.
 - d. Thrill-seeking/risk-taking behaviors involving fire and explosive devices have long been documented as behaviors displayed by adolescents seeking the adrenaline rush of experimentation. Couple the thirst for a thrill with the influences of social media challenges, and the situation is ripe for danger. Again, effective fire safety education, coupled with penalties for inappropriate behavior, is often a strategy that breaks the chain and stops dangerous behaviors.
 - e. In recent years, the combination of a lack of fire safety knowledge, peer/social media influences, ACEs and many other factors have led to an increase in purposeful, delinquent and criminal fire-related behaviors committed by adolescents.

- f. The most effective approach to youth firesetting is to prevent the incident from occurring in the first place. When it does occur, a community needs an effective medium to address it. This is best accomplished through a multi-agency task force approach. The National Fire Academy (NFA) offers world-class training with “Youth Firesetting Prevention and Intervention” (YFPI) (R/N0629). It is available free of charge to the fire service, police, youth justice, behavioral/mental health and social services professionals. Please visit “[Youth Firesetting Prevention and Intervention](#)” to learn more about what the NFA offers.
3. Civil unrest/domestic terrorism.
- a. Arson is often integral to religious and interracial conflict. Here the symbolism of arson is important. Fire not only destroys property, but can also render unrecognizable signs of life, “purifying” a community of its enemy.
 - b. Today, social, economic and political grievances find expression through new media. 21st century protestors do not merely seek access to government. Civil disobedience is performed in front of news photographers and online publics. But modern-day incendiarism clearly draws on a long tradition of insurrection through malicious damage.

ARSON CLEARANCE RATES

- Arson is a difficult crime to investigate and prosecute.
- In 2020, about 21.1% of all arson cases in the United States were cleared by either arrest or exceptional means (Statista, 2023).
- Convictions can be won if prosecutors and investigators work cooperatively.

Slide 1-29

- E. Arson clearance rates.
- 1. Arson is a difficult crime to investigate and prosecute.
 - 2. In 2022, about 24.7% of all arson cases in the United States were cleared by either arrest or exceptional means (Korhonen, 2023).

3. Convictions can be won if prosecutors and investigators work cooperatively.


UNDERSTANDING MOTIVES


- Arson has evolved since the 18th century from a wrongful individual act into an effective means of collective violence, too.
- People start fires for excitement, profit, to take revenge, as cover-up for other crimes and because of mental illness.
- By understanding why people use fire as a weapon, we can start to think about how to prevent it.

Slide 1-30

- F. Importance of understanding the motivations behind the use of fire as a weapon.
1. Psychiatrists and criminologists say people start fires for excitement, profit, to take revenge, as cover-up for other crimes and because of mental illness.
 2. By examining arson’s history, we add another motivating factor to this list. Arson has evolved since the 18th century from a wrongful individual act into an effective means of collective violence, too.
 3. By understanding why people use fire as a weapon, we can start to think about how to prevent it.

V. SUMMARY

 **FEDERAL EMERGENCY MANAGEMENT AGENCY**

 **U.S. Fire Administration**

SUMMARY

- History of fire as a weapon.
- National case study 1: Thomas Sweatt: D.C. arsonist.
- National case study 2: John Leonard Orr: fire captain and arsonist.
- Reasons to study arson.

Slide 1-31

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REFERENCES

- Clark, G. (2014, December 5). A short history of arson. *Phys.org*. <https://phys.org/news/2014-12-short-history-arson.html>
- Eischens, R. (2021, May 27). One year later, few charges for the arson and destruction. *Minnesota Reformer*. <https://minnesotareformer.com/2021/05/27/one-year-later-few-charges-for-the-arson-and-destruction/>
- Fire-stick farming. (2023, May 12). In *Wikipedia*. https://en.wikipedia.org/w/index.php?title=Fire-stick_farming&oldid=1154444671
- Keyes, A. (2017, June 30). The East St. Louis race riot left dozens dead, devastating a community on the rise. *Smithsonian Magazine*. <https://www.smithsonianmag.com/smithsonian-institution/east-st-louis-race-riot-left-dozens-dead-devastating-community-on-the-rise-180963885/>
- Korhonen, V. (2023, November 6). *Clearance rate of arson offenses in the United States in 2022, by type* [Infographic]. Statista. <https://www.statista.com/statistics/252463/clearance-rate-of-arson-offenses-in-the-united-states-by-type/>
- National Fire Protection Association. (2021). *Guide for fire and explosion investigations*. (Standard no. 921). <https://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=921>
- Penalties, 18 U.S.C. § 844, subsection i (2018). <https://www.law.cornell.edu/uscode/text/18/844>

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UNIT 2: WHY PEOPLE USE FIRE AS A WEAPON (MOTIVES AND METHODS)

TERMINAL OBJECTIVE

The students will be able to:

- 2.1 *Distinguish between the seven motives for why people use fire as a weapon.*

ENABLING OBJECTIVES

The students will be able to:

- 2.1 *Interpret the profit/fraud motive for arson.*
 - 2.2 *Interpret the spite/revenge motive for arson.*
 - 2.3 *Interpret the vandalism motive for arson.*
 - 2.4 *Interpret the crime concealment motive for arson.*
 - 2.5 *Interpret the extremism motive for arson.*
 - 2.6 *Interpret the excitement motive for arson.*
 - 2.7 *Interpret the vanity motive for arson.*
-

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FEMA U.S. Fire Administration

UNIT 2: WHY PEOPLE USE FIRE AS A WEAPON (MOTIVES AND METHODS)

Slide 2-1

TERMINAL OBJECTIVE

Distinguish between the seven motives for why people use fire as a weapon.




Photo courtesy of iStock.

Slide 2-2

ENABLING OBJECTIVES

- Interpret the profit/fraud motive for arson.
- Interpret the spite/revenge motive for arson.
- Interpret the vandalism motive for arson.
- Interpret the crime concealment motive for arson.
- Interpret the extremism motive for arson.
- Interpret the excitement motive for arson.
- Interpret the vanity motive for arson.

Slide 2-3

ADVISORY

- This presentation contains graphic photographs and frank discussion of fire deaths, victims and injuries.
- Students previously exposed to traumatic events, fire deaths and traumatic situations should be aware of the content of this module.

Slide 2-4

I. INTRODUCTION

MOTIVE VERSUS INTENT

- Motive.
 - The willful desire that leads to an act.
 - Not required to make a criminal case.
 - The reason a person commits a criminal act.
- Intent.
 - The plan a person has in mind to commit the crime.
 - The maliciousness of the act.
 - Part of the burden of proof.

Slide 2-5

- A. Motive is the willful desire that leads to an act. Although motive is not needed in a criminal case, it is important because it is the reason that a person commits a criminal act.
- B. Be careful not to confuse motive with intent. Intent is the plan that the person has in mind to commit the crime. It is also the maliciousness of the act and part of our burden of proof. Motive is the reason for the crime.

SEVEN MOTIVES FOR ARSON

- Profit/fraud.
- Spite/vengeance.
- Vandalism.
- Crime concealment.
- Extremism.
- Excitement.
- Vanity.



Photo courtesy of iStock.

Slide 2-6

C. There are seven commonly recognized motives for arson.

1. Profit/fraud.
2. Spite/vengeance.
3. Vandalism.
4. Crime concealment.
5. Extremism.
6. Excitement.
7. Vanity.

D. Two types of fraud.

DIRECT FRAUD

Deliberately setting fire to a property with the intention of obtaining financial gain or other benefits.



Photo courtesy of FBI.gov.

Slide 2-7

1. Direct: deliberately setting fire to a property with the intention of obtaining financial gain or other benefits.

INDIRECT FRAUD

Setting fire to a property to create a diversion that allows the person to commit another crime or that will indirectly result in financial gain.




Photo courtesy of Jason Mardrosian.

Slide 2-8

2. Indirect: setting fire to a property to create a diversion that allows the person to commit another crime or that will indirectly result in financial gain.

II. PROFIT/FRAUD

PROFIT/FRAUD MOTIVE

Intent: Monetary gain or monetary relief.

- Direct: To collect insurance.
- Indirect: To cover up a theft or eliminate a competitor.
- Follow the money.




Photo courtesy of Barry Grimm.

Slide 2-9

A. Reasoning/benefit.

1. The intention of arson committed for profit or fraud motives is usually monetary gain or relief.
 - a. This may be direct, such as setting fire to a business, home or vehicle to collect insurance money.

- b. It may also be indirect, such as starting a fire in a dumpster to cover up a theft or starting a fire in a factory to eliminate a competitor.
 - c. Follow the money.
2. Example: A road is scheduled for repair all summer.
- a. This causes traffic to be rerouted and results in a seasonal business on the road losing money.
 - b. The business owner is motivated to burn his own building so that he can collect insurance and offset his losses.

DEFINITION OF FRAUD

Deception deliberately practiced to secure unfair or unlawful gain.

Slide 2-10

3. Fraud is defined as a deception deliberately practiced to secure unfair or unlawful gain.
4. Defrauding an insurance company is a crime and a felony in most states.

PROFIT/FRAUD STATISTICS

- Occurs most frequently in retail properties.
- Responsible for a significant percentage of commercial property fires.
- More likely to occur during the day on weekdays.

Slide 2-11

B. Statistics.

1. The majority of arson for profit or fraud cases in nonresidential structures occurs in mercantile (retail) properties, followed by storage facilities and assembly (entertainment) properties.
2. Direct arson for profit or fraud is responsible for a significant percentage of all fires in commercial properties.
3. Arson for profit or fraud in nonresidential structures is more likely to occur on weekdays than on weekends and during the daytime hours, between 6:00 a.m. and 6:00 p.m. (National Fire Protection Association (NFPA), 2019).

**PROFIT/FRAUD
INVESTIGATIONS**

- Investigation usually time consuming.
- Must be guided by evidence.
- Requires awareness of witness/owner statements.




Photo courtesy of Jason Mandrosian.

Slide 2-12

C. Investigation and evidence of a profit/fraud motivation.

1. These investigations are usually time consuming.
2. Investigators must be careful to allow the evidence to drive the investigation. Hunches are not evidence of a crime.
3. Pay attention to what the homeowner/vehicle owner states in their interview about having insurance.

**POTENTIAL EVIDENCE OF PROFIT/
FRAUD MOTIVATED FIRESETTING**

- Previous attempt to sell asset.
- Sudden change to insurance policies.
- Sentimental items removed from residence pre-fire.
- Use of rental car to set fire.
- Planned remodeling.
- Economic status of owner.

Slide 2-13

4. The following may point to a possible profit/fraud motivation:
 - a. The arson suspect may have attempted to sell an asset, often lowering the price to the point where it is less than what they need financially.
 - b. Sudden changes to insurance policies, such as an increase in coverage just before the fire.
 - c. Sentimental items removed from the residence pre-fire.
 - d. Suspect may have rented a car to set the fire and escape without being identified.
 - e. Planned remodeling.
 - f. Property owner facing economic hardship.

- D. Examples of arson motivated by profit/fraud.
 1. A homeowner sets fire to his own home for the insurance coverage money.
 2. An owner sets fire to his car to get out of making high monthly payments.
 3. A contractor flipping houses hires someone to burn the houses to save money on clearing the site.

ARSON FOR HIRE

This criminal act may occur for many reasons, but the main element requires person(s) being hired to commit the crime of arson on behalf of another individual.



Photo courtesy of Jason Mardrosian.

Slide 2-14

E. Arson for hire.

1. Arson for hire goes hand-in-hand with insurance fraud. Suspects usually promise a monetary payment for the deed.
2. Sometimes the person hired is a family member, friend or someone in their social circle.
3. The owner is usually away when the fire occurs or is in a different part of town and can account for their location with witnesses.
4. Payments to the arsonist usually occur after insurance proceeds are paid to the owner.

OTHER CONSIDERATIONS

- Vehicle fires often overlooked.
- Crimes of opportunity:
 - During natural disaster.
 - During civil disturbances.



Photo courtesy of Jason Mardrosian.

Slide 2-15

F. Other considerations.

1. Vehicle fires are often overlooked by investigators.

2. Natural disasters can lead to crimes of opportunity, where intentionally set structure fires are attributed to the disaster.
3. During civil disturbances, business owners have been known to set their own fires and place the blame on the rioters.

III. SPITE/REVENGE

SPITE/REVENGE MOTIVE

- Involves hate toward victim.
- All about “getting even.”




Photo courtesy of Martin Monahan.
Slide 2-16

A. Reasoning/benefit.

1. Suspects use fire as a weapon when they have hatred toward the victim, who is usually someone the suspect knows well.
2. Most often, these fires are a result of infidelity or dissolved relationships.

SPITE/REVENGE STATISTICS

- Most common motive for intentional firesetting.
- Most deadly.
- Almost any age group.




Photo courtesy of Martin Monahan.
Slide 2-17

B. Statistics.

1. Spite/revenge is the most common motive for intentional firesetting.
2. It is also the deadliest form of firesetting.
3. It may involve almost any age group.

SPITE/REVENGE TARGET

- Victims are usually former spouses, partners, family members or friends.
- May also involve:
 - Work or job relations.
 - Labor disputes.
 - Bar fight.
 - Religious, ethnic or racial antagonism.



Photo courtesy of iStock.

Slide 2-18

C. Targets.

1. Victims are usually former spouses, partners, family members or friends.
2. May also involve:
 - a. Work or job relations.
 - b. Labor disputes.
 - c. Bar fight.
 - d. Religious, ethnic or racial antagonism.

SPITE/REVENGE INVESTIGATION AND EVIDENCE

- Suspect usually not seen setting fire.
- Recent threats.
- Planned or spontaneous.
- Often occurs at night.
- May involve combustibles or liquid accelerants.



Photo courtesy of Jason Mardrosian.

Slide 2-19

- D. Investigation and evidence of a spite/revenge motivation.
1. The suspect is usually not seen setting the fire.
 2. Victims will often disclose recent threats, acts of violence or wrongdoing from the suspect.
 3. It could be planned or in the moment.
 4. Often occurs at night.
 5. May involve combustibles or liquid accelerants.
- E. Examples.
1. An individual who sets fire to another's home or garage after a heated neighborhood dispute.
 2. A domestic dispute that leads to a spouse setting fire to the couple's home/property.

IV. VANDALISM

VANDALISM MOTIVE

- Usually impulsive — not premeditated.
- Often involves juveniles.




Photo courtesy of iStock.

Slide 2-20

- A. Reasoning/benefit.
1. These fires are usually impulsive and not premeditated.
 2. Vandals who set fires tend to be younger in age, often adolescents.

VANDALISM STATISTICS

- Malicious or mischievous firesetting that results in damage to property.
- Targets include schools, abandoned structures and flammable vegetation.
- Often classified as criminal damage to property.
- Accounts for a significant number of fires that involve criminal intent.

Slide 2-21

B. Statistics.

1. Vandalism-motivated arson is defined as malicious or mischievous firesetting that results in damage to property.
2. Vandals frequently target abandoned structures and flammable vegetation.
3. These fires are often classified as criminal damage to property.
4. Vandalism-related fires account for a significant number of fires that involve criminal intent.

VANDALISM INVESTIGATION AND EVIDENCE

- Often difficult cases because they are senseless and random.
- They may be sloppy.
- Often uncomplicated ignition method and crude devices.
- Routinely include theft and defacement.



Photo courtesy of iStock.

Slide 2-22

C. Vandalism investigations.

1. These are difficult cases because they lack an obvious motive and seem random.
2. However, many perpetrators are sloppy and leave clues.

D. Evidence.

1. The ignition method is typically uncomplicated. The devices are often crude.
2. These fires are routinely accompanied by theft and defacement.

E. Examples.

1. Young teenagers burn an abandoned car in an impoverished area of a city.
2. Several groups vandalized and burned multiple police cars during rampant civil unrest in Chicago, August 2020.

V. CRIME CONCEALMENT

CRIME CONCEALMENT MOTIVE

- Used to cover up other crimes.
 - Burglaries.
 - Homicides.
- Desperate attempt to cover up evidence and avoid getting caught.




Photo courtesy of Jason Mardirostian.

Slide 2-23

A. Reasoning/benefit.

1. This type is committed to cover up other crimes such as burglaries and homicides.
2. Perpetrators of this type of arson may believe that setting a fire is the best way to cover their tracks and avoid getting caught. They may also feel a sense of panic or desperation, knowing that they are likely to be implicated in the original crime if evidence is discovered.
3. By setting a fire, they hope to destroy evidence that could link them to a crime or distract law enforcement from investigating the original crime.
 - a. Books and records.

- b. Murder.
- c. Suicide.

**CRIME CONCEALMENT
STATISTICS**

Overall, relatively small portion of intentionally set fires.




Photo courtesy of Jason Mardrosian.

Slide 2-24

B. Statistics.

Overall, arson for crime concealment makes up a relatively small portion of intentionally set fires.

**CRIME CONCEALMENT
INVESTIGATION AND EVIDENCE**

- Signs of forced entry.
- Weapons in fire debris.
- Wounds on victim(s).
- Interviews with firefighters.

Important:
First responders should be aware of their actions and report them to the Incident Commander (IC) or fire investigator.

Slide 2-25

C. Investigation and evidence.

1. Interviews with firefighters are important with this type of crime so that their actions can be ruled out as a possible origin of what appears to be evidence of arson.
2. Check the property for all types of forced entry tools, such as crowbars, sledgehammers, pry bars or any other type of heavy-duty tool that can do damage to the doorjamb.

- a. First responders should be aware of their actions and report them to the Incident Commander (IC) or fire investigator.
 - b. Examples of things that should be reported might include whether they found it necessary to force a door open or if they found a door open when they arrived.
3. Burglaries and homicides are the two most common types of crimes that are concealed by arson.
 4. Particular attention needs to be paid to areas where it appears there was forced entry. These areas must be protected so that they can be processed correctly. Investigators can match tool markings through laboratory analysis.

**CRIME CONCEALMENT INVESTIGATION
AND EVIDENCE (cont'd)**

- Fatal fires have two scenes:
 - Origin and cause.
 - Death investigation.
- Autopsy required for all fatal fires.

Important:
Bodies should be left at the scene until the fire investigator arrives.

Slide 2-26

5. Fatal fires have two scenes: the origin and cause investigation and the death investigation.
 6. Autopsy is necessary with all fatal fires to rule out homicide.
 7. Investigators need to look for any obvious wounds on the decedent.
 8. Investigators should be aware of weapons mixed in with fire debris, such as knives, firearms, spent shell casings, bullets, etc.
- D. Examples.
1. In 2013, a man named James DiMaggio killed a woman and her son in California and then set his own house on fire to cover up the crime. He also kidnapped the woman's daughter, but she was eventually rescued.

2. In 2016, a woman named Holly Colino set fire to her apartment in New York City to cover up the murder of her boyfriend. The fire killed two of her neighbors and injured several others.

VI. EXTREMISM

EXTREMISM MOTIVE

- Intended to promote specific ideological or political agenda.
- May be part of a larger campaign of violence or terrorism.
- Difficult to anticipate.

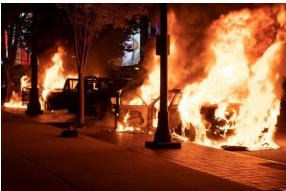


Photo courtesy of Shutterstock.

Slide 2-27

A. Reasoning/benefit.

1. Arson motivated by extremism is often carried out with the intention of promoting a specific ideological or political agenda. The perpetrators may seek to draw attention to their cause, instill fear in the public, or cause economic damage to a particular group or industry that they view as a threat to their ideology.
2. In some cases, the arson may be part of a larger campaign of violence or terrorism and may be intended to disrupt government operations, incite social unrest, or target specific individuals or groups who are seen as enemies of the extremist movement.

B. Two types.

1. Terrorism.
2. Civil disturbance.

EXTREMISM — TERRORISM

- Intended to cause large loss of life and damage.
- Purpose is to force change.



Photo courtesy of iStock.

Slide 2-28

C. Terrorism.

1. Reasoning/benefit of terrorism.

- a. Terrorism is the unlawful use of violence and intimidation, especially against civilians, in the pursuit of political or social aims.
- b. Intended to cause large loss of life and damage.
- c. The purpose of terrorism is to force some type of societal, government or policy change.

2. The greatest terrorism threat today is posed by lone offenders.

TERRORISTS

- Often radicalized online.
- Attack soft targets with easily accessible weapons.
- Motivated and inspired by mix of sociopolitical goals and personal grievances against their targets.



Photo courtesy of iStock.

Slide 2-29

- a. They are often radicalized online.
- b. They look to attack the soft targets with easily accessible weapons.

- c. Many of these violent extremists are motivated and inspired by a mix of sociopolitical goals and personal grievances against their targets.

TERRORISM STATISTICS

- Usually done in an area containing many civilians.
- Fires usually set at points of ingress and egress.
- Secondary devices may be placed in the area of the main attack to injure or kill first responders.

Slide 2-30

- 3. Statistics.
 - a. Terrorist acts are usually done in an area that contains a large number of civilians.
 - b. When terrorism involves arson, multiple fires are often set at points of ingress or egress.
 - The intent is to cause a large loss of life and maximum damage.
 - These fires may initially overwhelm first responders.
 - Fires may also be set in another part of town to divert firefighters from the main attack.
 - Secondary devices could be placed in the area of the main attack to injure or kill first responders.

TERRORISM EVIDENCE AND INVESTIGATION

- Usually heavily premeditated.
- Methods and materials are more sophisticated than standard firesetting.
- May be challenging to discern from criminal arson.



Photo courtesy of iStock.

Slide 2-31

4. Evidence and investigation of terrorism.
 - a. Usually heavily premeditated.
 - b. Methods and materials are more sophisticated than standard firesetting.
 - c. Terrorist arson may be challenging to discern from criminal arson at both the response and investigation stages.
 - d. Can be used in combination with other weapons and tactics to increase the severity of an attack.
 - e. It is important that first responders remain up to date on the evolution of new tactics and techniques, and that they remain open to the consideration of terrorism as a possible motivation.

TERRORISM EVIDENCE AND INVESTIGATION (cont'd)

- May involve:
 - Theft of large or heavy-duty vehicles.
 - Questions about building, floor plans, etc.
 - Damage to fire protection systems/ equipment.
 - Social media messaging.

Slide 2-32

- f. Potential indicators that fire may be being used as a terrorist weapon include the following.
 - Reported theft of large or heavy-duty vehicles.
 - Suspicious questioning about building floor plans, locations of egress, etc.
 - Evidence that fire protection systems and equipment have been damaged.
 - Social media messaging.

5. Examples.

- a. The 1993 bombing of the World Trade Center in New York City, which included an arson component that was meant to spread the bomb's blast and fire effects throughout the building.
- b. The 1995 Oklahoma City bombing, which included a truck bomb that was set off outside the Alfred P. Murrah Federal Building, killing 168 people and injuring more than 680 others.

EXTREMISM — CIVIL DISTURBANCE

- Spontaneous.
- Want to show power.
- Strike at symbolic targets.




Photo courtesy of iStock.

Slide 2-33

D. Civil disturbance.

- 1. Reasoning/benefit of civil disturbance.
 - a. Spontaneous firesetting during social protest.
 - b. They tend to strike at symbolic, economic or political targets.

CIVIL DISTURBANCE STATISTICS

- Usually associated with groups.
- Usually take public credit.
- Want to demonstrate power.

Slide 2-34

2. Statistics.
 - a. These actors almost always work in groups and more often than not, take public credit for their efforts.
 - b. They give the impression that the group activity involves many people.
 - c. They want to show the power of their group over others.

CIVIL DISTURBANCE INVESTIGATION AND EVIDENCE

- Fires set as opportunity arises — not heavily premeditated.
- Firesetters can be unpredictable and capable of causing serious property damage.
- Firesetters have little to no regard for the safety of bystanders.

Slide 2-35

3. Investigation and evidence of firesetting during civil disturbance.
 - a. These fires are not usually heavily premeditated.
 - b. These arsonists can be unpredictable and capable of causing serious property damage.
 - c. They also have little to no regard for the safety of bystanders.

4. Examples.
 - a. Beginning in July 1997, an environmental extremist group in the Pacific Northwest conspired to damage and destroy several commercial and government-owned properties over a period of several years (see <https://www.justice.gov/opa/pr/pacific-northwest-environmental-extremist-and-arsonist-pleads-guilty>).
 - b. On June 1, 2020, a St. Louis woman attempted to start fires in a 7-Eleven store as it was being looted by numerous individuals during a protest of the May 25, 2020, killing of George Floyd in Minneapolis, Minnesota (see <https://www.justice.gov/usao-edmo/pr/st-louis-woman-sentenced-27-months-prison-arson-attempts-during-protests>).

VII. EXCITEMENT

EXCITEMENT MOTIVE

- Set impulsively for thrills.
- Firesetter may stay to watch the fire department work.




Photo courtesy of iStock.

Slide 2-36

- A. Reasoning/benefit. These fires are set impulsively because the individual is seeking a thrill.

EXCITEMENT STATISTICS

- Usually set in a geographic location familiar to the firesetter.
- These firesetters often crave excitement to the degree that they will remain on the scene to watch the fire department work.

Slide 2-37

B. Statistics.

1. Usually set in a geographic location familiar to the person setting the fire.
2. These individuals often crave excitement to the degree that they will remain on the scene to watch the fire department work.

EXCITEMENT INVESTIGATION AND EVIDENCE

- Relatively rare.
- Can be difficult to identify specific cases where excitement was motive.



Photo courtesy of iStock.

Slide 2-38

C. Investigation and evidence.

1. Cases of arson motivated by excitement or thrill-seeking are relatively rare.
2. It can be difficult to identify specific cases where the primary motivation was excitement.

PYROMANIA/SEXUAL GRATIFICATION

Firesetter may have psychological problems that go beyond boredom.

- Pyromania.
- Sexual gratification.



Photo courtesy of iStock.

Slide 2-39

D. Pyromania/sexual gratification.

1. Some who set fires for the sake of excitement may have psychological problems that go beyond boredom.
2. This includes those who truly do get excited by flames, such as in the case of pyromania or those who are sexually aroused by the act of setting a fire.
3. There are various medical opinions on pyromania that are beyond the scope of this training.

E. Examples.

1. Pyromania is a clinical psychiatric diagnosis and an example of impulse control versus serial arson, which is criminal in nature.
2. According to Dr. Timothy Legg, pyromaniacs typically start fires every 6 weeks, with symptoms usually starting at puberty, and their set fires may come in clusters (Elmer, 2019).

VIII. VANITY

VANITY

- Set fires out of vanity, looking for recognition when they show up to “help.”
- Potential financial motive for paid, on-call firefighters.




Photo courtesy of iStock

Slide 2-40

A. Reasoning/benefit. There are those who set fires out of vanity, seeking recognition when they show up to “help.”

VANITY STATISTICS

- Relatively rare.
- Typically committed by individuals who want to create an image of themselves as powerful or important.
- May be associated with crimes of passion or domestic violence.

Slide 2-41

- B. Statistics.
1. Relatively rare.
 2. Typically committed by individuals who want to create an image of themselves as powerful or important.
 3. May be associated with crimes of passion or domestic violence.

VANITY INVESTIGATION AND EVIDENCE

- Firesetter is often the one that makes the 911 call.
- Will often present a story embellishing their own heroism.
- May target abandoned homes.



Slide 2-42

C. Investigation and evidence.

1. Arson suspects who set fires for vanity are often the 911 callers who report the fire.
2. They will usually present an embellished story emphasizing their own heroism.
3. Vanity firesetters who target abandoned homes may act as if it is occupied so that they can be seen trying to save lives inside the structure.

FIREFIGHTER ARSONISTS

- Often young.
- Distorted vision of what it means to be a firefighter.
- Disappointed.



Slide 2-43

D. Firefighter arsonists.

1. Firefighters who turn to arson are frequently young firefighters (career and volunteer) who seek recognition from their peers and supervisors as a talented firefighter.

- a. Their vision of being a firefighter includes battling large fires and acts of heroism.
 - b. They may be disappointed because their department does not respond to many structure fires.
2. Firefighter arsonists usually begin by starting brush or wildland fires and responding to the scene for the excitement and recognition.
 3. They then move to small structures like sheds, cars and even abandoned homes.
 4. Paid, on-call firefighters who commit arson may also do so for the monetary gain of fighting the fires they set.
- E. Examples.
1. Benjamin Cunha, a California volunteer firefighter, was arrested on Dec. 3, 2008, for arson and weapons possession (see <https://www.justice.gov/usao-edca/pr/former-firefighter-sentenced-five-years-prison-wildland-arson-fire-federal-land>).
 2. Four McDowell County firefighters were arrested in West Virginia after prosecutors related that the four firefighters committed several arsons “for the excitement” (see <https://www.firehouse.com/careers-education/news/21043838/four-mcdowell-county-wv-firefighters-charged-with-arson>).

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ACTIVITY 2.1

Determining Possible Motivation

Purpose

Explore the different motivations behind arson and understand the impact it has on individuals and society. This activity will encourage group discussion and analysis, and help students apply what they have learned about the motivations behind arson. It also promotes critical thinking and problem-solving skills.

Directions

1. As a group, review your case study and discuss the following. Use your easel pad to record your answers.
 - a. Based on the information provided, are there any signs that make you think that this might be arson? If yes, what are they?
 - b. If you think this might be an arson case, what do you think the motivation might be?
 - c. Based on your suspicion (if, in fact, you do suspect arson), what additional evidence should you be looking for?
2. As a group, select one of your members to serve as your representative.
3. Have your representative present the findings to the larger group and be prepared to defend your findings.

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ACTIVITY 2.1 (cont'd)

Case Studies

Case Study 1

- You arrive on the scene to discover a fire in a vacant single-family home.
- The fire occurred in a garbage container under the kitchen sink. There are no signs of smoking materials.
- The entire house appears to have recently been remodeled, except for the kitchen.
- There appears to be a square-shaped hole in the middle of the front yard; neighbors relate that there was recently a “for sale” sign that was in the front yard up until the day before the fire.
- An evidence debris sample returned as positive for the presence of gasoline from a sample collected from the garbage container in the area of origin.
- Entrance doors were found locked and secured by first-arriving emergency personnel.
- The police patrol officer from that beat relates that this house has been “for sale” for “a couple months.”

Case Study 2

- You arrive at the scene to find that a fire has occurred involving clothes on a loveseat in the living room and in a pile of clothes on the bed in the master bedroom.
- Doors were found locked and secured by first-arriving emergency personnel.
- Interviews with the owner reveal that he recently “broke up” with his girlfriend after she discovered he had a sexual encounter with her friend.
- He also reported that his former girlfriend had not returned the keys to his house.
- The clothes that were burned in both areas of origin belonged to the gentleman who owned the home.
- While at the scene, you receive word that the ex-girlfriend had just arrived at the emergency room with “small burns” to her hands.

Case Study 3

- You respond to a fire where you discover fire in a police cruiser parked out in front of a downtown store.
- You also notice that there are many demonstrations taking place downtown. You learn that leaders from several countries are in town as part of an annual financial meeting of world economies.
- Closer examination of the police cruiser reveals that the fire originated in the interior of the car.
- The police officer assigned to that cruiser tells you that there had been several demonstrations downtown for several days along with several “garbage can fires and broken windows.”
- Your investigation leads to the discovery of the remains of the neck of a bottle with a burnt cloth inside with an odor similar to that of gasoline.
- Lab conclusions came back positive for gasoline on the cloth/wick from inside the neck of the bottle remains.
- While at the scene, you hear reports of several more fires in various vehicles throughout downtown.



Case Study 4

- You respond to a large vacant warehouse fire in the late evening and discover a fire that originated within an interior corner.
- Several boxes and what appears to be garbage have been piled up in the corner of origin within the warehouse.
- All utilities were disconnected from the building.
- You learn that the warehouse had been vacant “for years.”
- You also notice a large smiley face spray painted in yellow on an exterior wall of the building.
- You recall that there have been at least five other fires in vacant warehouses, and that all involved smiley faces spray painted on exterior walls.
- Photos taken of the crowd reveals that there is one man consistently photographed at these scenes.

- You go to interview this man and you overhear him telling another person standing next to him, "I'll bet there are a lot more fires like this going on around town that they haven't figured out."

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IX. SUMMARY

 **FEMA**  U.S. Fire Administration

SUMMARY

- Introduction.
- Profit/fraud.
- Spite/revenge.
- Vandalism.
- Crime concealment.
- Extremism.
- Excitement.
- Vanity.

Slide 2-45

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REFERENCES

- Elmer, J. (2019, November 15). Is pyromania a diagnosable condition? What the research says. *Healthline*. <https://www.healthline.com/health/pyromania>
- National Fire Protection Association. (2019). *Intentionally set fires in non-residential buildings (2013-2017)*. Fire Analysis and Research Division.

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UNIT 3: VITAL INFORMATION FROM FIRST RESPONDERS

TERMINAL OBJECTIVE

The students will be able to:



- 3.1 *Explain the process, procedures and sources of gathering vital information.*

ENABLING OBJECTIVES

The students will be able to:

- 3.1 *Identify types of information relevant to a fire investigation.*
 - 3.2 *Describe the various sources of information.*
 - 3.3 *Describe how to gather information.*
 - 3.4 *Select appropriate processes, procedures and sources for gathering information in a fire investigation scenario.*
-

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UNIT 3: VITAL INFORMATION FROM FIRST RESPONDERS

Slide 3-1

TERMINAL OBJECTIVE

Explain the process, procedures and sources of gathering vital information.




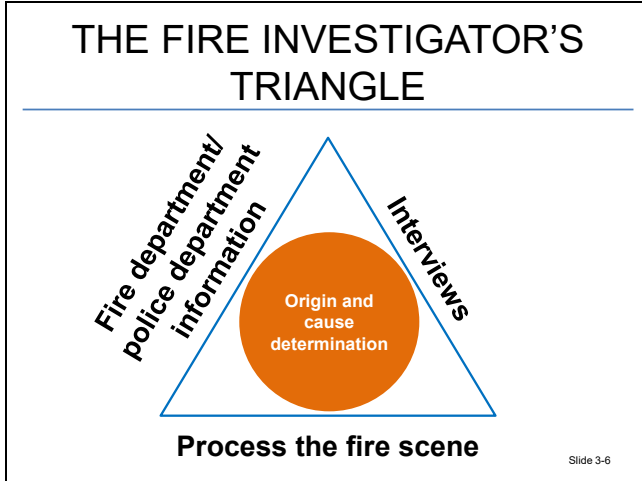
Photo courtesy of Laurie Kingley.

Slide 3-2

ENABLING OBJECTIVES

- Identify types of information relevant to a fire investigation.
- Describe the various sources of information.
- Describe how to gather information.
- Select appropriate processes, procedures and sources for gathering information in a fire investigation scenario.

Slide 3-3



OVERHAUL OPERATIONS

- Overhaul is important but, if possible, it should not compromise the fire investigation.
- Communication is key.

Photo courtesy of Laurie Kegley. Slide 3-7

- C. Once the fire is under control, firefighters begin overhaul operations, which consist of pulling ceilings and opening walls to locate and extinguish hidden pockets of fire.
1. While this is important, investigators heavily rely on fire patterns to locate an area or point of origin. If all walls and ceilings are pulled apart or collapsed by firefighters, this process cannot be done and may result in an undetermined classification.
 2. It is important that firefighters communicate with fire investigators before beginning overhaul so that investigators can enter the structure, photograph the scene and locate items of evidentiary value. Excessive overhaul hinders the work of fire investigators.

II. TYPES OF INFORMATION

TYPES OF INFORMATION

- Pre-scene.
- During operations.
- Post-scene.




Photo courtesy of Laurie Kegley. Slide 3-8

A. Types of information include what is observed with the five senses pre-scene, during operations and post-scene.

DATE AND TIME OF FIRE

- Accurate date and time information are imperative to all investigations.
- Time may be the most important ingredient in the case.

Slide 3-9

B. Dates of significance.

C. Time of fire can be significant. Does the occupant's explanation of the fire fit the time?

WEATHER

- At the time of the fire.
- Prior to the fire.
- During the fire.
- After the fire.

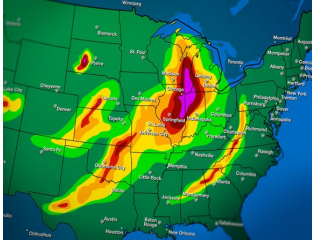


Photo courtesy of iStock.

Slide 3-10

D. Weather.

1. Lightning may be used as a cover.
2. Weather may delay fire department response.

ADDRESS

- Did you receive accurate dispatch information?
- Have you been to this location before?
- Do you know this area?
- Is there potential for additional issues?

Slide 3-11

E. Address.

1. Dispatch information.
2. Knowledge and previous experiences at the specific address.
3. Knowledge and experience in the area.
4. Potential for additional issues based on neighborhood.

WITNESS STATEMENTS

- Not the first concern.
- However, witnesses are important, and for the most part, glad to see first responders.



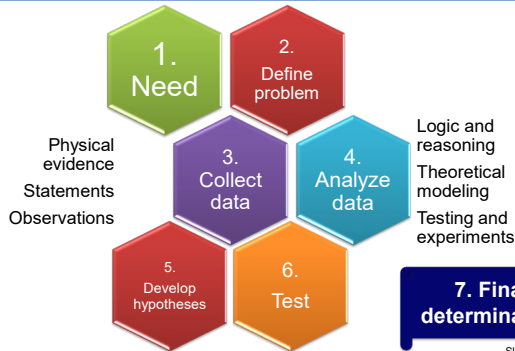
Photo courtesy of Laurie Kegley.

Slide 3-12

F. Statements by witnesses.

1. Not the first concern.
2. However, witnesses are important, and for the most part, glad to see first responders.

7 STEPS OF SCIENTIFIC METHOD



Slide 3-13

COLLECTION OF DATA

- Includes any information related to the incident.
- May occur in any stage of investigation and includes:
 - Witness information.
 - Fire patterns.
 - Arc mapping.
 - Fire dynamics.
 - K-9 teams.
 - Other sources.



Photo courtesy of iStock.

Slide 3-14

G. Scientific method and data collection.

SCENE

- Forced entry.
- Furniture.
- Occupancy/vacancy.
- Peculiar odors.
- Fingerprints or blood.
- Ignitable liquid.



Photos courtesy of Laurie Kegley.

Slide 3-15

H. Scene.

1. Forced entry.
 - a. Condition of doors.
 - b. Condition of windows.
2. Furniture.
 - a. Items missing or out of place.
 - b. Clothing missing.
3. Occupancy/vacancy.

- 4. Peculiar odors.
- 5. Fingerprints/blood.
- 6. Traces of ignitable liquid on flooring.

III. SOURCES OF INFORMATION

SOURCES OF INFORMATION

- Firefighters.
- Law enforcement.
- Utilities personnel.
- Neighbors.
- The scene itself.




Photo courtesy of Laurie Kegley

Slide 3-16

- A. One of the major pillars of a proper fire investigation is to interview first responders. A good solid interview with a first arriving fire officer can provide intricate details of the scene as it was upon arrival.
- B. First responder observations are not limited to what they observe at the time of the incident but also include what they know through their familiarity with the location and general area.
- C. Some of the information first responders can provide includes the following:
 - 1. Firefighters.
 - a. Fire location on arrival.
 - b. Fire patterns and spread conditions.
 - c. Ventilation and burn-through points.
 - d. Flame color and intensity. Is the smoke color normal for the type of fuel?
 - e. Areas of heavy concentration.

- f. Prior fires.
- 2. Police.
 - a. When thinking of first responders, investigators tend to think of firefighters first, but police officers are usually first on scene and can provide useful information from their observations.
 - b. Currently police officers are equipped with body cameras and smart phones. Video from body camera footage can assist fire investigators with fire conditions before fire department arrival.
 - Fire departments and police departments may want to consider collaborative planning for use of body cameras at future fires.
 - Police officers could detach their body cameras and walk around the entire structure so that the incident could be documented even before firefighters arrive.

OTHER SOURCES

- Emergency medical services (EMS) personnel.
- Dispatch/911 center.
- Witnesses.
- News media crews.
- Cameras.




Photo courtesy of Laurie Kegley.

Slide 3-17

- D. Other sources of early information include:
- 1. Emergency medical services (EMS) personnel.
 - a. EMS personnel may have interviewed the fire victim before they were intubated or transferred to a burn unit. If you are the paramedic or emergency medical technician (EMT), you can relay what was said to investigators.
 - b. EMS personnel probably cut the victim’s clothing off so that they could provide a thorough assessment and treatment. These clothes need to be protected and collected by investigators.

- c. Locations and severity of burns will be important. The areas of the burns can either corroborate or conflict with findings at the scene, which must be explained.
- 2. Dispatch/911 center.
 - a. Emergency dispatch and 911 centers have information that could assist first responders and fire investigators. Enhanced 911 can pinpoint the call or sometimes reveal the caller's identity from calls from the same phone number.
 - b. Emergency dispatch and 911 centers can send recordings of the phone calls and dispatch and operations transmissions to assist with an investigation.
 - c. Emergency dispatch and 911 centers can also assist by checking for a history of calls at the address that is on fire. Unfortunately, fire, police and EMS operations sometimes do not communicate; this is an opportunity to open lines of communication between agencies.
- 3. Witnesses.
 - a. Neighbors.
 - b. Bystanders.
- 4. News media or public information officers.
 - a. Was the news media present?
 - b. Someone may have sent up a drone that could provide footage.
- 5. Cameras.
 - a. Doorbell/security cameras.
 - b. Cell phone video.
 - c. Helmet cams.
 - First responders may have helmet cam video.
 - The fire engine may have a camera.
 - Police vehicles may have mobile video recorder camera systems that recorded the incident.

WHEN POTENTIAL EVIDENCE IS ENCOUNTERED

When potential evidence is encountered, observe it carefully for details so that you can provide useful information to the fire investigator.



Photo courtesy of Martin Monahan.

Slide 3-18

- E. When potential evidence is encountered, you should take a moment to observe it carefully for details so that, when the investigator asks a question about it, you can provide useful information.

AFTER THE FIRE

- Take time to rehydrate and recover.
- Take the opportunity to speak to the fire investigator without distractions.

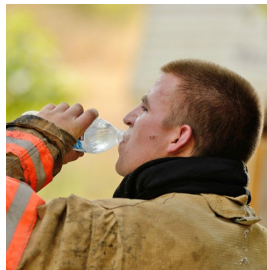


Photo courtesy of iStock.

Slide 3-19

- F. After the exigency of a fire situation has come to a close, first responders may take time to rehydrate and recover. This time is referred to as “rehab,” and it is an opportunity for the investigator to sit down and speak to first responders without distractions.

ACTIVE LISTENING

- The investigator must develop active listening skills.
- Patience is required for active listening.
- We hear but we do not listen. In an interview, every word is important.

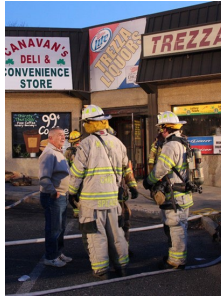


Photo courtesy of Laurie Kogley.

Slide 3-22

B. Active listening.

1. In many cases, witnesses, neighbors or bystanders may approach you with information they are eager to share.
2. To make the most of this information, you should develop active listening skills. This requires patience because our tendency is to hear but not listen. Every word may be important.

ACTIVE LISTENING STRATEGIES

- Concentrate on what is being said.
 - Listen for key words or phrases.
 - Note mood and intensity of what is being said.
 - Interpret nonverbal communication.



Photo courtesy of iStock.

Slide 3-23

3. Active listening strategies.

a. Concentrate on what is being said.

- Listen for key words or phrases.
- Note mood and intensity of what is being said.
- Interpret nonverbal communication.

ACTIVE LISTENING STRATEGIES (cont'd)

- Mentally review and summarize each point.
- Exercise patience.



Photo courtesy of iStock.

Slide 3-24

- b. Mentally review and summarize each point.
- c. Exercise patience.

AVOID THE PITFALLS

- Interrupting the narrative.
- Offering too much information.
- Appearing judgmental or critical.
- Threatening.
- Giving an opinion or advice.



Photo courtesy of iStock.

Slide 3-25

4. Avoid the following:
 - a. Interrupting the person's narrative.
 - b. Offering too much information of your own.
 - c. Appearing judgmental or critical.
 - d. Threatening the interviewee.
 - e. Offering your own opinion or advice.

- 5. If you feel active listening is an area you need help in, you may find it useful to take “Effective Communications for Fire and EMS Success” (ECFEMSS) (M1000).

INTERVIEWING DEFINITION

- Interviewing is questioning with a purpose. The purpose is to gather information that will establish the existence of previously unknown facts.




Photo courtesy of iStock. Slide 3-26

C. Interviewing.

1. Definition.

- a. Interviewing is questioning with a purpose.
- b. The purpose is to gather information that will establish the existence of previously unknown facts.

**INTERVIEWING DEFINITION
(cont'd)**

- An interview is a systematic conversation with a person believed to have information.
 - Dialogue.
 - Not an interrogation.
 - Interviewing is not a formal line of questioning.




Photo courtesy of iStock. Slide 3-27

- 2. Interviewing is a systematic conversation with a person believed to have information.
 - a. It is a dialogue.

- b. It is not an interrogation.
- c. It is not a formal line of questioning.

WHO TO INTERVIEW

- The 911 caller.
- Occupants of the residence.
- Owner of the residence.
- First-arriving first responders.
 - Firefighters.
 - Police officers.
 - EMS personnel.
- Neighbors, especially those with cameras.

Slide 3-28

- D. Who to interview at the fire scene.
 - 1. The 911 caller.
 - a. The 911 center can provide 911 callers' phone numbers.
 - b. This may help locate the caller if they do not live in the neighborhood but were just driving by.
 - 2. Occupants of the residence.
 - 3. Owner of the residence.
 - 4. First-arriving first responders can provide critical details of the fire and the fire's progression.

You may have been a first responder first on a scene. What details were you able to provide to investigators?

 - a. Firefighters.
 - b. Police officers.
 - c. EMS personnel.
 - 5. Neighbors, especially those with cameras.
 - a. Neighbors can provide a history of the address.

- b. They may know whether there had been an incident just before the fire or a history of violence, drugs or other concerning activities at the address.
- c. If you are asked by the fire investigator to check for cameras, ask the owners:
 - Do they know how to operate their system?
 - Are the date and time correct?
 - Can they email footage, or does it need to be placed onto a flash drive or DVD?

WHAT TO ASK

What should you ask potential sources of information at the fire scene?

- Firefighters.
- Law enforcement.
- Others.

Slide 3-29

E. What to ask.

DOCUMENTATION

- First responders should report all findings to chief officers so there is one point of information.
- Documenting actions in a report.
 - Litigation can take up to seven years.
 - Report will be a tool to prepare for testimony.
- If it's not in writing, it never happened.

Slide 3-30

F. Documenting and sharing information.

1. First responders should report all findings to chief officers so there is one point of information.
2. First responders should get into the habit of documenting their actions in a report. This comes in handy for litigation, which could take up to seven years. You can refer to your report to prepare for testimony.
3. Remember that if it is not in writing, it never happened.

WHEN TO CALL A FIRE INVESTIGATOR

- When the fire appears to be suspicious or criminal in nature.
- When there is a firefighter or police officer injury as a result of the fire.
- When the fire's cause may not be apparent or readily recognizable.
- When there is a fatality as a result of the fire incident.

Slide 3-31

G. When to call a fire investigator.

1. When the fire appears to be suspicious or criminal in nature.
2. When there is a firefighter or police officer injury as a result of the fire.
3. When the fire's cause may not be apparent or readily recognizable.
4. When there is a fatality as a result of the fire incident.

ACTIVITY 3.1

Observing the Fire Scene for Clues and Gathering Information

Purpose

Practice observing a fire scene for indications that the fire may have been deliberately set as well as gathering additional information that may be helpful to the investigation.

Directions

For each part of this activity, you will do the following:

1. Carefully observe the video and images displayed by the instructor. As you observe, consider the questions posed by the instructor and record your answers in your Student Manual (SM).
2. When directed to do so, discuss your observations and answers with your table group and come to an agreement on answers to the questions. Select a group representative.
3. The representative will report on your group's findings, but all team members should be prepared to answer questions as needed.

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ACTIVITY 3.1 (cont'd)

Observing the Fire Scene for Clues and Gathering Information Worksheet

Part 1: Arrival at the scene

1. What do you observe in the video and subsequent slides?

2. What is the potential significance of these observations?

Part 2: Observing for clues after the fire

1. What do you see on Slide 3-40 that has possible evidentiary value?

2. What do you see on Slide 3-41 that might be helpful to the investigation?

3. What do you see on Slide 3-42 that is noteworthy?

4. What do you observe on the second-floor landing shown on Slide 3-43?

5. What is significant on Slide 3-44?

Part 3: Gathering more information

1. Who would you talk to at the fire scene about what you observed?

2. What would you ask them?

VITAL INFORMATION FROM FIRST RESPONDERS

3. Who else would you like to talk to and what would you ask them?

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ACTIVITY 3.1 (cont'd)

Images

Conditions on Arrival



Arrival Conditions 1



Arrival Conditions 2



Arrival Conditions 3



Arrival Conditions 4



Front Yard Conditions on Arrival (Slide 3-40)



Conditions Inside Front Door (Slide 3-41)



Conditions on First Floor (Slide 3-42)



Conditions on Second Floor Landing (Slide 3-43)



Conditions Inside Bathroom Door (Slide 3-44)



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APPENDIX A

INTERVIEW QUESTIONS FOR FIREFIGHTERS

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Interview Questions for Firefighters

1. What time was the alarm?
2. Were you the first to arrive? When did you arrive?
3. Who called in the alarm? Do you have tapes of the call?
4. When you first arrived, what color was the smoke?
5. Did you hear any explosions upon arrival or during the fire?
6. What were the weather conditions during the incident?
7. Was there any incident of any kind that delayed you from getting to the scene as quickly as you normally would?
8. Did you see any familiar faces in the crowd? Was anyone being overly helpful to you?
9. Did you see any vehicles leaving the scene?
10. Did anyone in the crowd look odd in terms of their physical appearance? Was anyone wearing unusual clothing? Did anyone in the crowd simply not “fit” for the time and place of the fire?
11. Do you have any history of previous fires at this location? Is there a previous history of the same owner having other fires?
12. Did you note whether any doors or windows or any other building openings had signs of forced entry? Did you note the quality and type of door locking system (e.g., deadbolts)? How did you gain entry into the building? What entry tool did you use?
13. Did you take any evidence from the scene? Where is it now? Is there a chain of custody?
14. Was taking the evidence a matter of exigency? Would the evidence be destroyed if it were not taken?
15. If you now have that evidence, where is it being stored? Is it being guarded? Can it be handed off to law enforcement for chain of custody?
16. Did you observe any multiple points of origin, such as a fire on the first floor living room and a fire in the second-floor rear bedroom with no fire travel in between?
17. How quickly did the fire spread? Were there rapid changes in the fire environment to suggest an ignitable liquid was used?

VITAL INFORMATION FROM FIRST RESPONDERS

18. Was the building equipped with an alarm system, such as burglar alarm, fire alarm or combination? Was this a monitored system or pull station only? Was it disabled? Did it have evidence of tampering?
19. Was the building sprinklered? Was the system operational upon your arrival? Was there an outside alarm sounding upon arrival? Did the alarm company receive the alarm? Did they call the owner, police department or fire department first? Was the owner home?
20. Was an entry attack done? Which firefighters entered the building? When did they enter? What were their observations?
21. Were there any unusual odors at the fire scene? Did you smell any type of ignitable liquid such as gasoline or paint thinner?
22. Did you interview or speak to any witnesses at the fire scene?
23. How long did it take you to get the fire under control? What was the length of burn time? Did it vary in different sections of the building? Did you have to use an unusual amount of water to put the fire out? Did the fire intensify when water was applied?
24. Were you present when the owner arrived on the scene? What did you observe about the owner? If you received any descriptions of the owner's clothing, did their clothing match the description? Did the owner say they were asleep? Was their appearance consistent with their statement?
25. Did you speak to any bystanders? Did you ask them any questions? What did they say? Did you record or take notes of the discussion?
26. Did you talk to any neighbors? Who were they? What did they say? Did they say anything that was unusual to you? Were their observations consistent with your findings and other statements?
27. When you entered the residence, did you notice anything out of place or missing that could suggest a burglary or items removed pre-fire?
28. Did there seem to be an attempt to hide the fire from the street so that it could progress? Could this have been done to prevent someone from looking inside?
29. Did you notice any unusual covers on the windows, such as blankets or sheets?
30. Did you inspect the electrical panel, circuit breakers or fuses? Was there anything unusual?
31. Did you take any photographs during or after the fire?
32. Was there anyone videotaping the fire or firefighters? Who was that? Are they still there? Did you speak to them?

VITAL INFORMATION FROM FIRST RESPONDERS

33. Did you note any unusual vehicles in the vicinity of the fire scene? Did you record any plate numbers?
34. Where was the lowest and heaviest point of burning you observed in the premises?
35. Did you do any overhaul of the premises?
36. Was a fire watch posted? Who was that? When did the fire investigators arrive at the scene? Had the owner entered the building before the fire investigator arrived?
37. Did you take note of any flammable liquids present inside the building? Were the containers stored in the appropriate places?
38. Were there any “for sale” signs up on the property? Were they found in a place to suggest that they were hidden?
39. Has your department done any inspections of this building before this fire? Were there any compliance-related issues, recommendations or orders?
40. Can you outline the methods you used to fight the fire? Were there any tactical command decisions that might have affected the length of the fire in certain portions of the building? Did the fire flash when water was introduced?
41. Is there any evidence of construction being done inside the building? Are there any tools in place that would suggest active construction?

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APPENDIX B

INTERVIEW QUESTIONS FOR LAW ENFORCEMENT

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Interview Questions for Law Enforcement

1. Are there police body cameras or car cameras that could note fire conditions before firefighters arrived on the scene?
2. Do police officers who work the area of the fire scene have knowledge of the structure? Can they provide details of prior calls for service, including, for example, calls about occupants, visitors, vehicles, incidents just prior to the fire, recent threats of violence or domestic disputes?
3. Did you force entry into the structure prior to firefighter arrival? Forced doors without interviewing the patrol officer can drive the investigation in the wrong direction.
4. Upon arrival at a structure fire, did you make a mental note of the scene conditions and document them (e.g., whether the property seemed occupied or abandoned, if there was electricity to the structure, if any doors or windows were open, etc.)?
5. Did you document the weather conditions (e.g., wind gusts, from what direction, rain, snow, etc.)?
6. What were the fire conditions when you arrived?
 - a. Where could flames be seen?
 - b. Were there flames in different parts of the structure?
 - c. Was the fire on the outside of the structure?
 - d. Were there separate fires that cannot be explained?
 - e. Was there just smoke and no fire?
7. Who was present at the fire?
 - a. How were they dressed, considering the time of day and weather conditions? (If there is a fire in the middle of the night, a fire victim should have little to no clothes on and no shoes.)
 - b. Were any occupants fully dressed and wearing shoes in the middle of the night? (They may have just gotten home from work and may have crucial information to share, or they may be a suspect.)
8. Did anyone have injuries such as singed hair or burns to their hands or face?
 - a. If so, did this person say that they tried to fight the fire?

- b. Did this person withhold information about fighting the fire?
 - c. Do you believe them?
9. What did witnesses observe with respect to sounds like explosions or pops?
- a. Did they offer any information as to whether they looked at their clock or what they were watching on TV?
 - b. If yes, compare those times to when the 911 call came in to see if the times align.
10. How did the fire behave? What color was the smoke? Were there different colors in the smoke? Were there any unusual odors to note?
11. Were there any containers in plain view or on the property that should be secured?
- a. If there are containers, make sure they are documented.
 - b. Secure and guard them until a fire investigator arrives at the scene to document and collect them.
12. Are there any footsteps in snow or mud walking away from the scene?
- a. If yes, protect these areas the best that you can without being injured.
 - b. Notify a supervisor and fire investigators.
13. Are there cameras in the neighborhood?
- a. If yes, interview camera owners to see if they function.
 - b. Ask them to secure footage for investigators.
14. Make note of vehicles and tags in the vicinity of the fire scene.
- a. Are any vehicles running?
 - b. Are there keys in the ignition?
 - c. Is there any property packed inside the vehicle in plain view?
15. Was there anyone seen running from the scene before the fire? If yes, check the direction of travel for any evidence that was left behind.
16. Ask the officer to record all actions into a report.

UNIT 4: EVIDENCE

TERMINAL OBJECTIVE

The students will be able to:



- 4.1 *Explain the types of evidence that may commonly be encountered at a fire scene.*

ENABLING OBJECTIVES

The students will be able to:

- 4.1 *Identify potential evidence.*
- 4.2 *Describe how to preserve evidence.*
- 4.3 *Describe how to collect evidence.*
- 4.4 *Select appropriate actions to take with potential evidence.*
-

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 FEMA  U.S. Fire Administration

UNIT 4: EVIDENCE

Slide 4-1

TERMINAL OBJECTIVE

Explain the types of evidence that may commonly be encountered at a fire scene.




Photo courtesy of Jason Mardrosian.

Slide 4-2

ENABLING OBJECTIVES

- Identify potential evidence.
- Describe how to preserve evidence.
- Describe how to collect evidence.
- Select appropriate actions to take with potential evidence.

Slide 4-3

I. INTRODUCTION

WHAT IS A CRIME SCENE?

- Where an incident took place.
- Where a victim was found.
- Where evidence is located.




Photo courtesy of Jason Mardrosian.

Slide 4-4

- A. What is a crime scene?
1. A location where the incident took place.
 2. A location where a victim was found.
 3. A location where evidence is located.

FIRST RESPONDER RESPONSIBILITIES

- Render aid to any victims.
- Ensure safety.
- Call for additional services as needed.
- Secure the scene for investigators.




Photo courtesy of Laurie Kegley.

Slide 4-5

- B. When arriving at a fire scene, your first responsibilities include the following:
1. Render aid to any victims.
 2. Ensure safety.
 3. Call for additional services for expanding incident if beyond the scope of the initial first responders.

4. Secure the scene for investigators.

FIRST RESPONDER RESPONSIBILITIES (cont'd)

- Leave everything as it was found to the extent possible.
- Protect the scene the best that you can.
- Location and position of evidence could be important.




Photo courtesy of Martin Monahan.

Slide 4-6

- a. Leave everything as it was found unless there are exigent circumstances.
- b. Protect the scene the best that you can. The location and position of evidence could be important.

QUESTIONS TO ASK

- Is there a chance that evidence could be lost due to weather or changing conditions? How can I protect it until investigators arrive?
- Did first responders have to move items to tend to a victim? Remember/document where it was before it was removed.

Slide 4-7

- C. Ask yourself:
- 1. Is there a chance that evidence could be lost due to weather or changing conditions? How can I protect it until investigators arrive?
 - 2. Did I have to move items to tend to a victim? I need to remember where it was before it was moved.

RULES TO REMEMBER

- All first responders need to recognize and preserve potential evidence.
- Not all first responders will collect all types of evidence.
- If you do handle evidence, you become part of the chain of custody.

Slide 4-8

SEARCH TYPES

- As a first responder, you may be asked to assist with a search.
- There are several types of searches. Each type is suited to specific circumstances.

Slide 4-9

D. As a first responder, the Incident Commander (IC) may ask you to assist with a search. There are several types of searches, each suited to particular circumstances.

LINE OR STRIP SEARCH PATTERN

Works best on large outdoor spaces.



Photo courtesy of Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF).

Slide 4-10

1. Line or strip search works best on large outdoor scenes.

ZONE OR QUADRANT SEARCH PATTERN

Best used on scenes with defined zones.

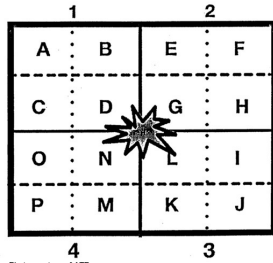


Photo courtesy of ATF.

Slide 4-11

2. Zone or quadrant search is best used on scenes with defined zones.

SPIRAL SEARCH PATTERN

- May be inward or outward spirals.
- Best for crime scenes without physical barriers.

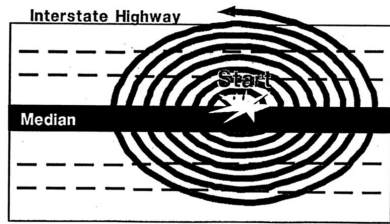


Photo courtesy of ATF.

Slide 4-12

3. Spiral method is a good choice for crime scenes without physical barriers. The spirals may be inward or outward.

II. RECOGNITION

FIRE INVESTIGATOR'S FIRST STEPS

- Survey scene.
- Check for real evidence.
- Prepare notes.
- Photograph scene.
- Use markers.
- Draw diagrams.
- Conduct detailed search.




Photo courtesy of Martin Monahan.

Slide 4-13

A. The following initial steps, often used by fire investigators, will help you to recognize and document evidence for later analysis.

1. Survey the scene.
2. Check for any real evidence.
3. Prepare notes.
4. Photograph the scene.
5. Use markers to number the evidence.
6. Draw diagrams as needed.
7. Conduct a detailed search.

FIRE INVESTIGATOR'S FIRST STEPS (cont'd)

- Record and collect.
- Conduct a final walk-through of the scene.
- Break down the crime scene.




Photo courtesy of Laurie Kegley.

Slide 4-14

8. Record evidence and collect if necessary.
9. Conduct a final walk-through of the scene.
10. Break down the crime scene.

BE ALERT

- Obvious signs of arson.
- Peculiar/significant odors.
- Evidence of forced entry.
- Remnants of Molotov cocktail.
- Witness statements.
- Injuries.




Photo courtesy of Martin Monahan.

Slide 4-15

B. In order to assist investigators with their job, first responders should be alert and let investigators know if they observe any of the following:

SIGNS OF ARSON

- Accelerated fire with remnants of ignitable liquid containers present.
- Eyewitnesses to act.
- Prior threats of arson.
- Past arson fires at the same location.




Photo courtesy of Martin Monahan.

Slide 4-16

1. Obvious signs of arson.
 - a. Accelerated fire with remnants of ignitable liquid containers present.
 - b. Eyewitnesses who saw the fire set.
 - c. Prior threats of arson.

- d. Past fires at the same location were arson, such as abandoned properties.

PECULIAR/SIGNIFICANT ODORS

- Smell of petroleum products, such as gasoline, in an unexpected location.
- Any odors that are different than the normal smells of a structure fire.

Slide 4-17

- 2. Peculiar/significant odors.
 - a. Smell of petroleum products, such as gasoline, in an unexpected location.
 - b. Any odors that are different than the normal smells of a structure fire, along with other corroborating evidence to support the smell, such as forced entry, separate fires in different parts of the structure, witness statements, and firefighters' accounts of conditions inside the structure during suppression efforts — the totality of the circumstances.

EVIDENCE OF FORCED ENTRY

- Open doors and windows upon arrival, but no one is home at the time of the fire.
- Broken glass or tool markings that firefighters did not create.
- Broken but clean glass found in yard from a window that is soot-filled.
- Forced interior doors or evidence of theft.
- Discarded forced entry tools.

Slide 4-18

- 3. Signs of forced entry prior to first responders' arrival.

- a. Open doors and windows upon arrival, but no one is home at the time of the fire.
- b. Broken glass or tool markings that firefighters did not create.
- c. Broken but clean glass found in yard from a window that was soot-filled.
- d. Forced entry of interior doors, along with evidence of theft.
- e. Discarded forced entry tools, such as crow bars, hammers or screw drivers.

MOLOTOV COCKTAILS

- One of the most dangerous, deadly and destructive incendiary devices.
- Components may survive as evidence.




Photo courtesy of Shutterstock.

Slide 4-19

- 4. Remnants of a Molotov cocktail.
 - a. Surprisingly, components of the Molotov cocktail have survivability, such as the base and neck areas, along with wicking material.

MOLOTOV COCKTAILS (cont'd)

- **Do not collect.**
- Protect all pieces.
- Wait for law enforcement.



Photo courtesy of Martin Monahan.

Slide 4-20

- b. If you come across remnants of a Molotov cocktail, **do not collect**. Protect all pieces and wait for law enforcement.

WITNESS STATEMENTS

- Ask who, what, when, where and why questions.
- These provide basic information and can be corroborated with other statements or evidence.
- Ask witnesses if they can provide any background on the address.




Photo courtesy of Laurie Kegley.

Slide 4-21

- 5. Witness statements.
 - a. Ask questions about who, what, when, where and why for the best information.
 - b. These questions offer basic information for investigators and can be corroborated with other statements or evidence.
 - c. Ask whether witnesses can provide any background on the address.
- C. Evaluating witness statements.
 - 1. Weigh what witnesses tell you against what you observed on your arrival at the fire scene.
 - a. What was the size of the fire?
 - b. From where was it venting, or was it still inside the structure?
 - c. Were any windows broken?
 - d. Had you been to this structure before?
 - 2. What a witness tells you may support or contradict your mental image of the fire's flow path and venting, but listen closely and remember what the person said.
 - a. There may be another explanation due to what was taking place during firefighting tactics from a different vantage point.

- b. Always ask where the person was standing and at what time they observed what they are now telling you.
- 3. Remember that fire spread is based on time and that fire dynamics play a major role in witness interviews.

Fire dynamics is the detailed study of how the chemistry, fire science and engineering disciplines of fluid mechanics and heat transfer interact to influence fire behavior (National Fire Protection Association (NFPA) 921, *Guide for Fire and Explosion Investigations*, 2024).

D. Avoiding injuries.

- 1. If you encounter potential evidence at the scene and it is not at risk of being destroyed, leave it alone.
- 2. If possible, notify whoever is responsible for collecting evidence and make them aware of the potential evidence. Let them handle it.
- 3. Protection of life is always the priority. If you come upon an injured person, you must render aid. As you do, however, you should still be sizing up the situation.

SIZING UP THE SCENE

- Look for evidence of other crimes.
- Evidence can reveal:
 - How?
 - Who?
 - Why?
- Location of potential evidence important.




Photo courtesy of Laurie Kegley.

Slide 4-22

E. First responders should also size up the situation and communicate any of the following to the IC.

- 1. Evidence of other crimes.
 - a. Some types of evidence can be used to determine the “how.”

For example: Someone committing a burglary may attempt to cover it up by setting fire to the crime scene, thinking that it will destroy any fingerprints or DNA.

- b. Some types of evidence can be used to determine the “why.”

For example: Missing items, along with a dismantled alarm system and forced entry, would be consistent with a burglary.


- 2. Location and position of evidence could be important.

F. Limit salvage and overhaul until investigators arrive.

- 1. This may require a wait of several days.
- 2. Even then, they may only get a police officer or fire marshal.
- 3. If criminality is suspected, the officer in charge and police may have to make decisions or call to move to an investigative mindset.
 - a. Fragile evidence will have to be collected or protected.
 - b. This may not be as easy as it sounds, and it depends on their jurisdiction.
 - c. Taking pictures with their cell phone may be helpful later.

TYPES OF EVIDENCE

- Real.
- Documentary.
- Demonstrative.
- Testimonial.
- Digital.



Photos courtesy of Martin Monahan, Barry Grimm, iStock, Shutterstock.

Slide 4-23

G. Five types of evidence.

REAL EVIDENCE

- Physical items found at crime scene.
- Firearm, knife, bloody clothing, etc.



Photo courtesy of Martin Monahan.

Slide 4-24

1. Real (or physical) evidence.
 - a. Physical items found at a crime scene.
 - b. Includes firearms, knives, bloody clothing or other materials.

DOCUMENTARY EVIDENCE

- Documents that might be used in court.
- Mortgage, lease, contract, etc.



Photo courtesy of Shutterstock.

Slide 4-25

2. Documentary evidence.
 - a. Documents that could be used in any court proceeding.
 - b. Includes mortgage paperwork, leases, contracts, etc.

DEMONSTRATIVE EVIDENCE

- Documents that demonstrate the crime scene or area.
- Diagrams, photos, videos, etc.



Photo courtesy of Barry Grimm.

Slide 4-26

3. Demonstrative evidence.
 - a. Instructional documents that demonstrate the crime scene or area.
 - b. Includes diagrams, pictures, videos, etc.

TESTIMONIAL EVIDENCE

- Statements made by fact witnesses or experts.
- When a first responder provides testimony, it is usually as a fact witness.



Photo courtesy of iStock.

Slide 4-27

4. Testimonial evidence.
 - a. Statements made by fact witnesses or experts testifying in a court proceeding.
 - b. When a first responder provides testimony, it is usually as a fact witness in a criminal or civil proceeding.
 - c. Fact witnesses are shown demonstrative evidence to assist them with their testimony. For example, this may include a map with the location where they saw the heaviest flames or where they noted a piece of evidence that was protected.

DIGITAL EVIDENCE

- Electronic or digital files.
- Call logs, text messages, emails, photos, hard drive data, etc.




Photo courtesy of Shutterstock.

Slide 4-28

- 5. Digital evidence.
 - a. Electronic or digital files.
 - b. Includes any information that can be extracted from a cell phone, tablet, computer or other electronic device, such as call logs, text messages, emails, photos, hard drive data, etc.

III. PRESERVATION

A. The first stage of evidence preservation begins with first responders.

LOCARD'S EXCHANGE PRINCIPLE

- Whenever two objects come into contact with each other, something is exchanged and taken away by each.
- Basis of the transfer and recovery of all scientific evidence.

Slide 4-29

- 1. Locard's exchange principle.
 - a. Described by Dr. Edmond Locard (1877-1966) in 1920.

- b. States that when two objects come into contact with each other, something is exchanged and taken away by both objects.
- c. This is the basis of the transfer and recovery of all scientific evidence (Gooch & Williams, 2014).

PRESERVE EVIDENCE

- Do not smoke, drink or throw any trash within the scene (e.g., coffee cups, soda bottles, cigarette butts).
- Do not use bathrooms or sinks.
- Note whether lights were on, doors were locked and if TVs were on or off.
- Determine what is primary scene.
- Determine whether there is a secondary scene.

Slide 4-30

- 2. Preserve evidence whenever possible; however, the priority is always life safety.
- B. In order to preserve evidence:
- 1. Do not smoke, drink or throw any trash within the scene (e.g., coffee cups, soda bottles, cigarette butts).
 - 2. Do not use bathrooms or sinks.
 - 3. Note whether lights were on, doors were locked and if TVs were on or off.
 - 4. Determine the primary scene and whether there is a secondary scene.

**PROTECT THE SCENE:
CONTROL ACCESS**

<p>1</p> <p>Call investigator early.</p>	<p>2</p> <p>Only allow first responders until fire is extinguished.</p>	<p>3</p> <p>Don't allow any unnecessary personnel.</p>
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Slide 4-31

- C. Protect the scene.
 - 1. Every fire should be treated as a crime scene.
 - 2. Control access.
 - a. Call the investigator early.
 - b. Only allow first responders until fire is extinguished.
 - c. Do not allow any unnecessary personnel onto the scene.

LIMIT SALVAGE AND OVERHAUL

- In areas that manifest obvious potential evidence, do all you can to limit overhaul.
- This is not always easy.
- Do not compromise your own or your team's safety.




Photo courtesy of Barry Grimm.

Slide 4-32

- 3. Limit salvage and overhaul to assist the fire investigator.
 - a. Do not tear apart the room or throw things out of the room unless necessary.
 - b. The priority is always life safety, however.

TOOL MARKS

- Be sure the fire investigator is aware if the first responders had to force entry.
- Do not damage already compromised doors or windows, inside or out.

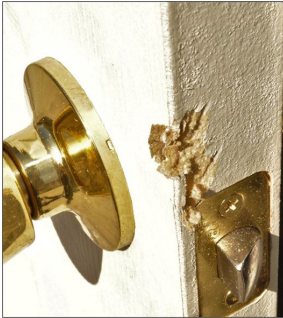


Photo courtesy of Martin Monahan.

Slide 4-33

- 4. Tool marks.
 - a. If the fire crew had to force entry themselves, be sure this is revealed to the fire investigator so that it is not considered as potential evidence.
 - b. Do not damage already compromised doors or windows, inside or out.

PACKAGING

- This may not be part of your usual assignments.
- However, during an exigent circumstance, you may have to collect an item.




Photo courtesy of Martin Monahan. Slide 4-34

- 5. Packaging.
 - a. This may not be part of your usual assignments.
 - b. However, during an exigent circumstance, you may have to collect an item.

TIRE AND SHOE IMPRESSIONS

- Protect/preserve the area: cover with a box or clear plastic.
- Don't allow any foot or vehicular traffic.




Photo courtesy of Martin Monahan. Slide 4-35

- 6. Tire and shoe impressions.

- a. Protect/preserve the area: cover with a box or clear plastic.
- b. Do not allow any foot or vehicular traffic.

CONTINUE TO RESTRICT ACCESS

- After fire is extinguished, limit access to investigators only.
- Post firefighter at entrance or near evidence.
- Use tape or evidence cone.




Photo courtesy of iStock. Slide 4-36

- 7. Once the fire is extinguished and all equipment is removed, restrict access to investigators only.
 - a. Post a firefighter or police officer at the entrance or near the evidence.
 - b. You may need additional officers if there are multiple points of entry onto the property.
 - c. Tape off evidence or use an evidence cone.

NOTIFICATION

- When evidence is discovered, notify Incident Commander (IC) or investigator.
- Immediately curtail activity in the area if safe to do so; no overhaul or hose streams.
- Safeguard the potential evidence with common sense.

Slide 4-37

- D. If you find something that may be evidence, notify someone. Usually this will be the IC or fire investigator.

IV. COLLECTION

WHEN TO COLLECT

- To prevent destruction.
- For safekeeping.

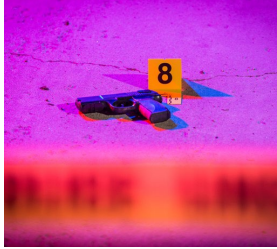


Photo courtesy of iStock. Slide 4-38

- A. Collect **only** when necessary.
1. To prevent destruction.
 2. For safekeeping.

REASONS NOT TO COLLECT

- Admissibility in court.
- Contamination/spoliation.



Photo courtesy of iStock. Slide 4-39

- B. Reasons **not** to collect include:
1. Admissibility in court.
 - a. During court proceedings, the prosecutor will have to build a foundation of your training and education to support your actions at the scene of the incident.
 - b. If you are not trained or part of the investigative team, your actions may cause the evidence you collected to be suppressed based on your lack of training.

2. Fire investigators are not fact witnesses. They would usually be qualified as an expert, which allows them to render an opinion.
3. Most agencies have state fire marshals, which are a separate entity and have different policies. Fire marshals are usually part of law enforcement, which will have specific policies on photographing, numbering, storing and testing evidence.
4. Spoliation/contamination.

SPOLIATION

- Loss, destruction or material alteration of an object or document that is evidence or potential evidence in a legal proceeding by one responsible for its preservation.
- **Bad faith** destruction of a document or piece of evidence related to an issue that may arise at trial.

Slide 4-40

a. Spoliation.

- The “loss, destruction or material alteration of an object or document that is evidence or potential evidence in a legal proceeding by one who has the responsibility for its preservation” (NFPA 921, 2024, 3.3.190).
- To date, no public sector fire companies are known to have been held liable for contamination.
- Described as bad faith destruction of a document or piece of evidence related to an issue that may arise at trial. The key term to recognize regarding spoliation is “bad faith.”
- If a firefighter destroys evidence by doing their job to extinguish a fire (i.e., acting in good faith), this is not spoliation.
- Translation: Do not unnecessarily damage or destroy evidence at a fire scene that may have value to an interested party.

CONTAMINATION

- Most contamination of physical evidence occurs during its collection.
- This is especially true during the collection of liquid and solid accelerant evidence.
- The liquid or solid accelerant may be absorbed by the fire investigator's (or first responder's) gloves or may be transferred onto the collection tools and instruments.

Slide 4-41

b. Contamination.

- Most contamination of physical evidence occurs during its collection.
- This is especially true during the collection of liquid and solid accelerant evidence.
- The liquid or solid accelerant may be absorbed by the fire investigator's (or first responder's) gloves or may be transferred onto the collection tools and instruments.

C. How to collect to minimize contamination/destruction.

1. Only collect when necessary.
2. Take preventive steps.

a. Most contamination occurs during collection.

SOURCES OF CONTAMINATION

- Evidence containers.
- Tools.
- Protective equipment.
- Emergency equipment.



Photo courtesy of Martin Monahan.

Slide 4-42

- b. Sources include:
- Evidence containers.
 - Tools.
 - Protective equipment.
 - Emergency equipment.

**AVOIDING CONTAMINATION
OF EVIDENCE**

- Clean boots before entering site.
- Use new containers and wear clean, disposable gloves.
- Use special tool kit to process fire scene.
- Keep tools separate from other equipment and clean after use.
- Do not bring tools or generators powered by petroleum distillates into an area of fire origin.

Slide 4-43

- c. Preventive steps include:
- Clean boots before entering the site.
 - Use new containers and wear clean disposable gloves.
 - Use a special tool kit to process fire scenes.
 - Keep tools separate from other equipment and clean after use.
 - Do not bring tools or generators powered by petroleum distillates into an area of fire origin.
 - Use lighter streams of water to trim out the remainder of hot spots.
 - Slow down and be aware of items that could be potential evidence, whether you believe the fire was incendiary or accidental.

CHAIN OF CUSTODY

- Process that tracks the movement of evidence through its collection, transportation, testing and court proceedings.
- Important because the case depends on it.
 - Can show that the evidence was not lost or altered.
 - Can show evidence is in same condition as it was at the time of the incident.

Slide 4-44

D. Chain of custody.

1. The process that tracks the movement of evidence through its collection, transportation, testing and court proceedings.
2. Chain of custody is important because the case depends on it.
 - a. The chain of custody report can show that the evidence was not lost or altered.
 - b. It can show evidence is in the same condition as it was at the time of the incident.

CHAIN OF CUSTODY (cont'd)

- The chain of custody begins at the scene when evidence is collected and ends in the courtroom.
- If broken, the evidence could be thrown out before trial.
- Don't be responsible for allowing an arsonist to walk free on a technicality.

Slide 4-45

3. The chain of custody begins at the scene when evidence is collected and ends in the courtroom.

4. If there is a gap in time when the evidence was not secured, a defense attorney could argue in a suppression hearing that the chain of custody was broken, resulting in the evidence being thrown out before trial.
5. Do not be responsible for allowing an arsonist to walk free on a technicality. Always be cognizant of the chain of custody.

WHAT TO DO WITH COLLECTION

- Notify IC/investigator.
- Guard.
- Document when transferred (chain of custody).




Photo courtesy of iStock.

Slide 4-46

E. What to do with collection.

1. Notify the IC or investigator.
2. Guard.
3. Document when transferred (chain of custody).
 - a. Accurate historical accounting of evidence must be kept.
 - b. This should detail all parties who have come into possession of the evidence.

If potential evidence has a possibility of being destroyed, can a firefighter remove it, or do they need a police officer to take it?

Slide 4-47

F. Key takeaways.

1. Remember where you found it or mark the location.
2. Notify law enforcement as soon as possible that you have it.
3. Guard the evidence until a police officer takes possession of the evidence. You cannot leave it unprotected or unguarded in a vehicle or in the vicinity of anyone who can take it.
4. Complete chain of custody paperwork and turn over evidence per your jurisdictional policy.
 - a. Any items that are truly potential evidence belong to the police.
 - b. If you believe that the fire scene is a crime scene or a potential crime scene, always err on the side of safety.
 - Protect the scene and do not abandon it.
 - Make sure that person has a cell phone and a radio and that they are protected from the elements.
 - Finally, notify your command.

V. LOCAL CASE STUDY (JODY TIGHE)



VIDEO PRESENTATION

“RESPONDING TO THE CALL”

Slide 4-49

BACKGROUND

- Three-story, five-unit residential structure.
- Heavy fire conditions to C side.
- Neighbors report children trapped on second floor.
- IC strikes a second alarm.
- Entry was made to structure before attack lines were stretched to attempt rescue.

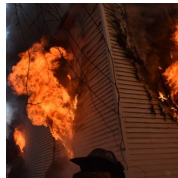


Photo courtesy of Martin Monahan.

Slide 4-50

A. Background.

1. Arrival conditions.

- a. On Feb. 19, 2018, at 0240 hours, the Scranton fire and police departments responded to a reported structure fire at 640 Willow Street.
- b. Fire units responding were able to see heavy fire conditions from a distance, which suggested a working structure fire.
- c. On arrival, they confirmed that a three-story, wood-framed residential structure containing five residential units was on fire.
- d. Neighbors reported that children were trapped on the second floor.
- e. The IC struck a second alarm when he learned that there was entrapment, along with heavy fire conditions.

- f. Entry was made to the structure before attack lines were stretched in order to attempt rescue.

BACKGROUND (cont'd)

- Flow path changed when door was breached.
- One firefighter fell down steps and injured.
- Another trapped on second floor called mayday.
- Truck company rescued firefighter.
- Fire went defensive.




Photo courtesy of iStock.

Slide 4-51

- g. The flow path changed when the door was breached.
- h. One firefighter fell down a flight of steps and was injured.
- i. A second firefighter became lost as the room he was in rapidly deteriorated, and he called a mayday. Truck company firefighters rescued him.
- j. Firefighters switched to a defensive operation.

FIRE SUPPRESSION

- Suppression efforts lasted several hours.
- Firefighters used master streams to the back of the residence to make way for firefighters to reenter the structure to conduct a search.
- Before firefighters reentered the structure, they were informed that all occupants were accounted for.




Photo courtesy of Martin Monahan.

Slide 4-52

- 2. Suppression.
 - a. Suppression efforts lasted several hours.

- b. Firefighters used master streams to the back of the residence to make way for firefighters to reenter the structure to conduct a search.
- c. Before firefighters reentered the structure, they were informed that all occupants were accounted for.

FIRE SUPPRESSION (cont'd)

- Aerial operations and master streams continued until it was safe enough for firefighters to reenter for additional areas on fire.
- Firefighters reentered the structure and found that the fire had spread to multiple rooms.

Slide 4-53

- d. Aerial operations and master streams continued until it was safe enough for firefighters to reenter the structure.
- e. Firefighters reentered the structure and found that the fire had spread to multiple rooms.

VICTIM LOCATED

- One civilian victim was located and transported to the local trauma center for smoke inhalation and inhalation burns.
- Victim was intubated and transferred to a burn unit for intensive burn care.




Photo courtesy of iStock.

Slide 4-54

- 3. Victim located.
 - a. A civilian burn patient, Alicia Pane, was located at the scene.
 - b. Ms. Pane was transported to the local trauma center for smoke inhalation and inhalation burns.

- c. Ms. Pane was intubated and transferred to a burn unit for intensive burn care.

COMPLICATION

- Several minutes into the fire, the IC was notified of a tractor-trailer accident with fire on the northbound side of Interstate 81.
- The IC requested Dunmore Fire Department to respond for mutual aid since all Scranton Fire resources were depleted.

Slide 4-55

- 4. Complication.
 - a. A second emergency call was dispatched for a tractor trailer accident on the interstate involving fire. A neighboring fire agency was dispatched to the accident due to resources being depleted for the structure fire.
 - b. The neighboring fire agency arrived at the vehicle fire scene to find the tractor trailer fully engulfed in fire.

B. Motives.

- Do you think that this fire was intentionally set? Why?
- Based on what you know so far, what are some possible motivations for this case? What leads you to think so?

Slide 4-56

EVIDENCE AT SCENE

- An ignitable liquid detection canine alerted on the second-floor decking.
- An article search was conducted, and a scarf that had melted and had burned edges was located.



Photo courtesy of Martin Monahan.

Slide 4-57

C. Evidence at scene.

1. An ignitable liquid detection canine named Ember alerted on the second-floor decking.
 - a. Due to instability of the steps and partial collapse of the second-floor porch decking, investigators cut the decking from the porch and placed it in the alley in a discrimination line for Ember to search.
 - b. The pieces of wood that K-9 Ember alerted on were canned for further testing at the state police crime laboratory.
 - c. The remnants of can one, containing a portion of the second-floor steps, and can two, containing a portion of the decking, tested positive for the presence of gasoline.
2. During a separate search, Ember was sent out into the alley on an article search to see if she found anything.
 - a. Ember alerted on a piece of clothing on the ground, which was estimated at approximately 75 yards away from the burning structure.
 - b. The clothing was determined to be a scarf and was sent to the state police crime laboratory to be tested for DNA and ignitable liquids, based on the crime lab's recommendation.

EVIDENCE — SURVEILLANCE VIDEO

- Surveillance cameras showed a person walking toward the residence.
 - Approximately four minutes later, heavy fire conditions seen on camera.
 - Several seconds later, person appeared running away from fire with lower leg actively on fire.
 - About two minutes later, a black Nissan SUV was captured driving away at high rate of speed.

Slide 4-58

- D. Surveillance cameras were located in the alley that ran along the fire building.
1. Investigators watched 26 video clips searching for a suspect to enter the frame. At that time, it was unknown what time the suspect entered the property, and occupants had not yet been ruled out.

VIDEO PRESENTATION

“SURVEILLANCE VIDEO 1”

Slide 4-59

- a. Investigators located a suspect entering the camera at approximately 0237:30 hours.
- b. The suspect remains on the scene for approximately four minutes.

VIDEO PRESENTATION

“SURVEILLANCE VIDEO 2”

Slide 4-60

- c. At 0241:44 hours, the fire is seen starting. Investigators noted a bright light in the camera, which corroborated the initial findings of an ignitable liquid.
- d. At 0242:05 hours, the suspect is seen fleeing in the direction that K-9 Ember located the scarf. Investigators note that his shoes are on fire.

VIDEO PRESENTATION

“SURVEILLANCE VIDEO 3”

Slide 4-61

- e. At 0243:50 hours, a vehicle is seen on the front porch camera fleeing the scene.
- f. The department’s auto theft detective identifies the vehicle as a Nissan Murano.

EVIDENCE — SURVEILLANCE VIDEO (cont'd)

- Investigators were not able to locate additional cameras to better identify the suspect vehicle or tag.
- Investigators determined that no tenants owned or operated a Nissan Murano.



Photo courtesy of Shutterstock.

Slide 4-62

2. Investigators were not able to locate additional cameras to better identify the suspect vehicle or tag.

E. Investigation.

TENANTS

- Third floor: off-duty city police officer home with his wife.
- Second floor east: two adults and one child.
- Second floor west: adult female victim of smoke inhalation.
- First floor east: traveling nurse working at time of fire.
- First floor west: individual home at time of fire.

Slide 4-63

1. The incident was active at the time of investigators' arrival.

WITNESS INTERVIEWS

- Second floor east tenants were not on scene at the time of investigators' arrival. It was reported that they were picked up by family or friends.
- One second floor east tenant was intubated and awaiting transport to the burn center at time of investigator's arrival.
- One first floor tenant was unaware of fire until the officer on the third floor alerted him to it.

Slide 4-64

2. Witness interviews.

a. Tenants were interviewed at the scene.

OFF-DUTY POLICE OFFICER INTERVIEW

- Off-duty police officer stated he was awakened by a loud bang at the back of his apartment.
 - Thought someone was trying to break in.
 - Retrieved service weapon and looked into kitchen.
 - Saw fire progressing up outer pickets of rear porch.



Photo courtesy of Laurie Kegley.

Slide 4-65

b. An off-duty police officer, James Smith, lived on the third floor with his wife.

- He stated that he was awakened by a loud bang at the back of his apartment.
 - He initially thought someone was trying to break into his apartment through the back door.
 - He retrieved his service weapon and looked into kitchen.
 - He saw fire progressing up outer pickets of rear porch.

**OFF-DUTY POLICE OFFICER
INTERVIEW (cont'd)**

- Officer Smith related that he and his wife fled the apartment in what they were wearing.
 - Told wife to exit the building.
 - Alerted other tenants of fire.
 - Second-floor west tenant was not answering door, so he shouldered the door and found his neighbor in her living room.

Slide 4-66

- Officer Smith related that he and his wife fled the apartment in what they were wearing.
 - He told his wife to exit the apartment building and started alerting other tenants of the fire.
 - He related that the second-floor west tenant was not answering door, so he shouldered the door and found his neighbor in her living room.
 - He then kicked open a second-floor apartment door when the female tenant did not answer. She was located in a smoke-filled environment and almost succumbed to smoke inhalation.

**OFF-DUTY POLICE OFFICER
INTERVIEW (cont'd)**

- The apartment was filled with smoke and her airway and face filled with soot.
- Officer Smith said that he escorted his neighbor outside.
- He also stated that he felt that this might be a targeted attack against him due to his job.

Slide 4-67

- The apartment was filled with smoke and her airway and face filled with soot.

- Officer Smith said that he escorted his neighbor outside.
- He also stated that he felt that this might be a targeted attack against him due to his job.

ORIGIN AND CAUSE INVESTIGATION

- Origin and cause investigation during overhaul.
- Porch decking and exterior stairwell were found to be partially collapsed.
- Several pieces of decking and steps from the upper portions of the stairwell were cut out.




Photo courtesy of Laurie Kegley.

Slide 4-68

3. Origin and cause investigation.

- a. The origin and cause investigation occurred overnight during overhaul, but was halted due to poor lighting conditions, a partially collapsed exterior stairwell and ice buildup. The origin and cause investigation continued at first light as a matter of exigency.

HEAVY FIRE CONDITIONS AT REAR

Firefighters reported heavy fire conditions to the entire rear exterior of the structure.



Photo courtesy of Martin Monahan.

Slide 4-69

- b. Firefighters reported heavy fire conditions to the entire rear exterior of the structure.

FIRE PATTERNS

All fire patterns showed fire entering the structure from the rear second- and third-floor porches.



Photo courtesy of Martin Monahan.

Slide 4-70

- c. All fire patterns showed fire entering the structure from the rear second- and third-floor porches.

BURNED EXTERIOR



Photo courtesy of Martin Monahan.

Slide 4-71

ORIGIN AND CAUSE INVESTIGATION — FUEL LOAD

There was minimal fuel load on the back porches, other than wood decking. There was no furniture, and the structure was covered by aluminum siding.



Photo courtesy of Martin Monahan.

Slide 4-72

- d. There was minimal fuel load on the back porches, other than wood decking. There was no furniture, and the structure was covered by aluminum siding.

ROCK AND CLEAN GLASS IN KITCHEN

During search of second-floor east apartment, a large rock and several pieces of clean glass from the kitchen window were found.



Photo courtesy of Martin Monahan. Slide 4-73

- e. A large rock was also located on the kitchen floor of the second-floor apartment.
- f. At this point, the scene was locked down by the police officers and a crime scene log was started.
- g. Many leads were tracked, focusing mostly on the possibility that the actor targeted the off-duty police officer.

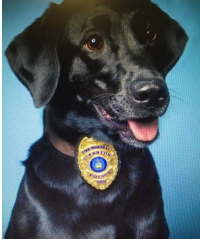
ORIGIN AND CAUSE INVESTIGATION (cont'd)

- Based on Officer Smith's statement, fire patterns and the large rock, an ignitable liquid detection canine was brought in to assist investigators.
- The canine alerted on several portions of decking, along with several steps.
- Revealed ignitable liquid was introduced on second-floor back porch.

Slide 4-74

IGNITABLE LIQUID DETECTION CANINE

Ember, an ignitable liquid detection canine, alerted on the second-floor decking.



Photos courtesy of Martin Monahan.



Slide 4-75

- h. Based on Officer Smith's statement, fire patterns and the large rock, the ignitable liquid detection canine Ember was brought in to assist investigators.
- Ember alerted on several portions of decking, along with several steps.
 - The origin and cause investigation revealed that an ignitable liquid was introduced on the second-floor back porch.

EVIDENCE CAN

Evidence can containing pieces of the burnt decking.



Photo courtesy of Martin Monahan.

Slide 4-76

K-9 EMBER AREA SEARCH

- Investigators theorized that the suspect walked to the scene from a side street.
- The canine was sent into the alley to conduct an area search for any discarded containers that may have been transported to the scene by the suspect.
- The canine alerted on a piece of clothing approximately 75 yards from the fire scene.

Slide 4-77

ALERT ON CLOTHING

The ignitable liquid detection canine alerted on a piece of clothing found 75 yards from the scene.



Photo courtesy of Martin Monahan.

Slide 4-78

CLOTHING FOUND IN ALLEY

Evidence can with clothing found in alley.



Photo courtesy of Martin Monahan.

Slide 4-79

- i. Investigators theorized that the suspect walked to the scene from a side street.

- j. Ember was then sent into the alley to conduct an area search for any discarded containers that may have been transported to the scene by the suspect.
- k. Ember alerted on a piece of clothing approximately 75 yards from the fire scene. It was identified as a scarf.
 - Portions of the scarf were melted and burned.
 - Ember alerted on the scarf again after it was placed in the evidence can.

EVIDENCE AND THEORIES

- Evidence was taken by the crime scene unit so investigators could remain at the scene and to lessen chances of a chain of custody issue.
- Investigators theorized suspect may have used scarf to hide their identity.
- Investigators sent the scarf for DNA analysis and trace for ignitable liquids.
- Investigators searched for cameras in the alley that might have captured video of the suspect.

Slide 4-80

- 4. Evidence and theories.
 - a. The crime scene unit took evidence so that investigators could remain at the scene. This also lessened the chances of a chain of custody issue.
 - b. Investigators theorized that the suspect may have been using the scarf to hide their identity.
 - c. Investigators sent the scarf to be tested for DNA and trace amounts of ignitable liquids.
 - d. Investigators searched for cameras in the alley that might have captured video of the suspect.

CRIMINAL INVESTIGATION

- Focused on targeted attack of police officer.
- Search of reports/previous charges did not identify potential suspects.
- Tenants denied having any problems, threats or recent breakups.
- Second-floor east tenants uncooperative but cleared as suspects (though not as targets).
- Building owner cleared as a suspect.

Slide 4-81

5. Criminal investigation.

- a. The investigation focused on a targeted attack of the police officer.
- b. A search of reports/previous charges did not identify potential suspects.
- c. Tenants denied having any problems, threats or recent breakups.
- d. The second-floor east tenants were uncooperative but cleared as suspects (though not as targets).
- e. The building owner was cleared as a suspect.

LAB ANALYSIS AND RESULTS

Evidence was transported to the Pennsylvania State Police Crime Laboratory and analyzed.

- Gasoline confirmed on scarf found at the scene.
- Unknown male DNA also found on the scarf.
- Deck flooring and steps tested positive for gasoline.

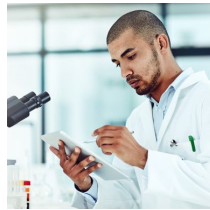


Photo courtesy of iStock.

Slide 4-82

6. Lab analysis and results.

- a. Evidence was transported to the Pennsylvania State Police Crime Laboratory and analyzed.

- b. Investigators received assistance from laboratory scientists on the best course of action to test the scarf for DNA and for trace evidence of ignitable liquid.
 - Testing confirmed the presence of gasoline on the scarf.
 - Testing also revealed DNA from an unknown male.
 - There was no match in the DNA database.
- c. Deck flooring and steps tested positive for gasoline.

CASE GOES COLD

- No suspects developed.
- Arrest made in a serial arson case in the area several months later, but the male was cleared as a suspect in this case.
- Investigators placed this case inactive in May of 2018.




Photo courtesy of iStock.

Slide 4-83

- 7. Case goes cold.
 - a. Investigators followed several leads, but no suspects were developed.
 - b. Patrol officers assisted by checking local hospitals and urgent care centers for burn victims.
 - c. An arrest was made in a serial arson case in the area several months later, but the male was cleared as a suspect in this case.
 - d. Investigators labeled this case inactive in May of 2018.

THE BIG BREAK

- In July 2018, investigators received information from an Amy Oliver regarding a fire at 640 Willow Street in February.
- Amy described a call from a Joseph Rundle about her ex-boyfriend Jody Tighe.



Photo courtesy of iStock.

Slide 4-84

8. The big break.

- a. In July 2018, a female witness named Amy Oliver came forward with information regarding the fire.
- b. Amy described a call she received from an acquaintance named Joseph Rundle about her ex-boyfriend Jody Tighe.
 - Joseph lived at 640 Willow Street, in the second-floor east apartment.

THE BIG BREAK (cont'd)

- Rundle apologized for testifying against her in a custody case with Tighe, with whom she shares a child.
- Claimed that Tighe had something to do with a fire in his second-floor east apartment.
- Said Tighe suspected him of having a relationship with his current girlfriend.
- Told Amy he would not go to the police.

Slide 4-85

- Joseph told Amy that he wanted to apologize for having gotten involved in a custody case Amy had with Jody over a child they shared.
- Joseph also told Amy that his apartment had burnt down in February, and that he was sure Jody did it because he (Jody) believed that Joseph was sleeping with Jody's new girlfriend.

- He told Amy he would not go to the police but that he would “handle it on the street.”

MORE INFORMATION

- Amy told the investigator that she hadn’t known about the apartment fire, but that Tighe had told her he witnessed a truck fire that same evening.
 - He claimed he was burned saving the trucker.
 - Tighe sent pictures to Amy of himself at the scene of the truck fire.

Slide 4-86

- c. Amy told the investigator that she had not known about the apartment fire, but that she had heard from Jody at the time it had happened.

- Jody did not tell Amy about the apartment fire, but he did tell her that he had witnessed an accident that night in which a tractor-trailer caught fire.
- Jody claimed that he had rescued the trucker from the burning tractor-trailer and had himself been burned.
- Jody sent pictures to Amy of himself at the scene of the crash. He was dressed in all black and was burned on his lower extremities.

MORE INFORMATION (cont'd)

- Amy stated that Jody’s lower left leg and ankle were severely burned, requiring skin grafts at the burn center.



Photo courtesy of iStock.

Slide 4-87

- Amy told the investigator that the burns to Jody's lower left leg were severe and that he had received skin grafts on his lower left leg and ankle at the burn center.

**CRIMINAL INVESTIGATION
RESUMED**

- Investigators requested a copy of the accident report. The report identified:
 - State trooper who responded to the truck fire.
 - Richard Jones, a truck driver who witnessed the accident.
 - Peter Charles, the truck driver involved in the accident.

Slide 4-88

9. Criminal investigation resumed.
 - a. After Amy called them, investigators requested a copy of the accident report. This helped them to identify the state trooper who responded to the accident as well as the victim and another witness.
 - b. The state trooper investigating the crash stated that approximately 20 minutes after the crash, he was approached by a male who stated that he saved the driver from the truck.
 - That male was identified as Jody Tighe.
 - Tighe told the trooper he was returning from work when he drove upon the accident, and that he saved the trucker and his dog but was burned in the process.
 - The investigating trooper stated that he thought it was odd that Tighe parked on the entrance ramp, requiring him to run at least a tenth of a mile to get to the truck.
 - The trooper stated that Tighe had a black Nissan Murano and refused treatment from emergency medical services at the scene.
 - The trooper was not aware that there was a structure fire in the city at the time of the accident, and Tighe had not been developed as a suspect at that time.

- c. The witness to the crash was identified as Richard Jones.
 - Mr. Jones stated that he was just entering the interstate and saw the crash and fire behind him in his driver's side mirror.
 - Mr. Jones stated that he parked his truck and ran back to the crash to assist. Mr. Jones saw the trucker, Peter Charles, get out of his passenger side door unassisted.
 - Mr. Jones said no one else was around at that time except for him and the driver who crashed.

- d. Peter Charles, the trucker who had the accident, stated that he fell asleep at the wheel, veered off the highway and jackknifed his truck against the guard rail.
 - Mr. Charles stated his truck caught fire due to the crash but that he was able to exit the truck out the passenger side door without any assistance.
 - He also said he was already out of the truck and speaking to Mr. Jones when the accident was reported to 911.

CRIMINAL INVESTIGATION
(cont'd)

- Investigators contacted human resources (HR) where Tighe told the trooper he worked. They had no record of him as a current or past employee.
- Investigators planned to hire an outside agency to conduct surveillance on Tighe.




Photo courtesy of iStock.

Slide 4-89

- 10. Criminal investigation continued.
 - a. Investigators contacted human resources (HR) at the business where Tighe told the trooper he worked. They had no record of him as a current or past employee.
 - b. Investigators decided to obtain assistance from an outside agency to conduct surveillance on Tighe.

CRIMINAL INVESTIGATION (cont'd)

- Investigators planned to seize a discarded drinking glass or other item containing Tighe's DNA.
- Amy Oliver was notified of this plan since she shared a child with the suspect.
- She was assured that there would be constant surveillance.

Slide 4-90

- c. They planned to seize a discarded drinking glass or other item that might contain Tighe's DNA.
- d. Amy Oliver was notified of this plan since she shared a child with the suspect. She was assured that there would be constant surveillance.

MORE HELP FROM THE WITNESS

- Amy told the investigator that she already had Tighe's DNA, obtained when he filed for custody of their daughter.
- She provided investigators with the paternity test, which matched that on the scarf.



Slide 4-91

- 11. More help from the witness.
 - a. In a surprise turn of events, Amy Oliver informed investigators that she already had Tighe's DNA.
 - Amy told the investigator that she had obtained Tighe's DNA when he filed for full custody of their daughter.
 - Since they were not married, Tighe was required to take a DNA test to prove that he was the child's father.

- b. Amy provided investigators with the DNA results, and they were expedited to the Pennsylvania State Police Crime Laboratory as a comparison sample.
- c. Further analysis revealed that DNA from Tighe’s paternity test matched that on the scarf found at the scene.

CONCLUSION

- Based on the evidence obtained by investigators, prosecutors approved charges for arson and related charges.
- U.S. marshals were called in to assist with Tighe’s apprehension.
- Tighe was arrested and an interview was attempted; however, Tighe invoked his right to remain silent and asked for a lawyer.

Slide 4-92

12. Conclusion.

- a. Based on the evidence obtained by investigators, prosecutors approved charging Tighe with arson and related charges.
- b. U.S. marshals were called in to assist with Tighe’s apprehension.
- c. Tighe was arrested and an interview was attempted; however, Tighe invoked his right to remain silent and asked for a lawyer.

CONCLUSION (cont’d)

- Commonwealth v. Tighe remained in litigation for approximately five years.
- Tighe pled guilty on the day of the trial and was sentenced to four to eight years in state prison.




Photo courtesy of iStock

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- d. The case Commonwealth v. Tighe remained in litigation for approximately five years.
- e. Tighe pled guilty on the day of the trial and was sentenced to four to eight years in state prison.

13. Debrief.

**DEBRIEF: LESSONS
LEARNED**

- Investigators developed preconceived notions.
 - Assumed they were looking for a suspect who had a vendetta against the off-duty police officer.

Slide 4-94

- a. Investigators were emotionally driven to find a suspect who had a vendetta against the off-duty police officer.

**DEBRIEF: LESSONS
LEARNED (cont'd)**

- Investigators failed to follow up with the burn center.
 - They knew from video that the suspect was on fire while fleeing the scene.
 - They felt the burns were severe enough to require treatment.
 - Never contacted the burn center until told by Amy Oliver about Tighe's surgery.

Slide 4-95

- b. Investigators determined from the video that the suspect was on fire while fleeing the scene.
- c. Investigators felt that the burns were severe enough that they would require treatment at a burn center.

- d. Investigators never contacted the burn center until they received information from the female witness regarding Tighe's surgery.
- e. For more information on intentional structure fires, visit <https://www.nfpa.org/News-and-Research/Data-research-and-tools/US-Fire-Problem/Intentional-fires.Research/Data-research-and-tools/US-Fire-Problem/Intentional-fires>.

ACTIVITY 4.1

Recognizing, Preserving and Collecting Evidence at a Fire Scene

Purpose


Practice examining a fire scene for potential evidence and describing how it should be preserved or collected.

Directions

1. Working with your table group, examine each image and answer the following on a new page of your easel pad:
 - a. **Evidence:** What potential evidence do you see in the image?
 - b. **Implications:** What is the significance of the evidence? What are the implications?
 - c. **Treatment:** How should the evidence be preserved and/or collected by a first responder?
 - d. **Other:** What other actions, if any, should be taken?
2. Select a representative to report to the class and then be prepared for discussion.

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VI. SUMMARY



SUMMARY

- Introduction.
- Recognition.
- Preservation.
- Collection.
- Local case study.

Slide 4-107

VII. FINAL EXAM AND COURSE WRAP-UP

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REFERENCES

Gooch, G., & Williams, M. (Eds.). (2014). *A dictionary of law enforcement*. Retrieved March 6, 2024, from <https://www.oxfordreference.com/display/10.1093/acref/9780192807021.001.0001/acref-9780192807021>

National Fire Protection Association. (2024). *Guide for fire and explosion investigations* (Standard no. 921). www.nfpa.org

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ACRONYMS

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ACRONYMS

ACE	adverse childhood experience
ATF	Bureau of Alcohol, Tobacco, Firearms and Explosives
ECFEMSS	“Effective Communications for Fire and EMS Success”
EMS	emergency medical services
EMT	emergency medical technician
FI: FR	“Fire Investigation: First Responders”
FI: FW	“Fire Investigation: Fire as a Weapon”
HIPAA	Health Insurance Portability and Accountability Act
HR	human resources
IAAI	International Association of Arson Investigators
IC	Incident Commander
IG	Instructor Guide
NETC	National Emergency Training Center
NFA	National Fire Academy
NFPA	National Fire Protection Association
NOAA	National Oceanic and Atmospheric Administration
SAW	Student Activity Worksheet
SM	Student Manual
U.S.C.	United States Code
USFA	U.S. Fire Administration
USFS	U.S. Forest Service
YFPI	“Youth Firesetting Prevention and Intervention”

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