

Fire Science 1



UNIT 1: Introduction to the Fire Service & Communication

ESSENTIAL QUESTION

How do firefighters operate in society?

BIG IDEAS

Students will...

- Understand the roles and responsibilities of a firefighter.
- Understand how fire departments are organized and operate.
- Demonstrate and apply knowledge of industry safety standards.
- Demonstrate and apply proper emergency communication skills.

GUIDING QUESTIONS

- Content
 - What is the mission of the fire service?
 - How are fire departments organized?
 - What safety programs and initiatives are in place to promote firefighter safety?
 - How do firefighters practice personnel accountability?
 - What is the process of fire communication?
- Process
 - How do industry safety standards relate to firefighters?
 - Explain the ways the fire department works with other organizations.
 - How do we use standards and regulations to identify best industry practices?
 - How does the fire department use radio communication?
- Reflective
 - Why is it important to understand the history of the fire service?
 - How would your lifestyle affect your ability to perform the job?
 - How does your communication style impact others and yourself?

FOCUS STANDARDS

Summarize the history of the fire service.

Explain the organizational characteristics, cultural challenges, and cultural strengths that influence the fire service.

Describe the mission of the fire service. [NFPA® 1001, 5.1.1]

Describe the organization of fire departments. [NFPA® 1001, 5.1.1]

Distinguish among functions of fire companies. [NFPA® 1001, 5.1.1]

Summarize primary knowledge and skills the firefighter must have to function effectively. [NFPA® 1001, 5.1.1, 6.1.1]

Distinguish among the primary roles of fire service personnel. [NFPA® 1001, 5.1.1, 6.1.1]

Describe fire department organizational principles. [NFPA® 1001, 5.1.1]

Locate information in departmental documents and standard or code materials. [NFPA® 1001, 5.1.2]

Distinguish between fire department SOPs and rules and regulations. [NFPA® 1001, 5.1.1]

Explain the ways the fire service may interact with other organizations. [NFPA® 1001, 5.1.1]

List the main types of job-related firefighter fatalities, injuries, and illnesses. [NFPA® 1001, 5.1.1]

Describe the National Fire Protection Association® standards related to firefighter safety and health. [NFPA® 1001, 5.1.1]

Identify Occupational Safety and Health Administration (OSHA) regulations and how they relate to firefighters. [NFPA® 1001, 5.1.1]

Summarize the model that supports the concept of risk management. [NFPA® 1001, 5.1.1]

Describe fire department safety and health programs. [NFPA® 1001, 5.1.1]

Summarize firefighter health awareness issues. [NFPA® 1001, 5.1.1]

Summarize safe vehicle operations. [NFPA® 1001, 5.3.2]

Summarize guidelines for riding safely on the apparatus. [NFPA® 1001, 5.3.2]

Describe ways to help prevent accidents and injuries in fire stations and facilities. [NFPA® 1001, 5.1.1]

Explain general guidelines for tool and equipment safety. [NFPA® 1001, 5.1.1]

Describe ways to maintain safety in training. [NFPA® 1001, 5.1.1]

State the practices a Firefighter I use for emergency scene preparedness and safety. [NFPA® 1001, 5.1.1, 5.3.3]

Summarize general guidelines for scene management including highway incidents, crowd control, and cordoning off emergency scenes. [NFPA® 1001, 5.1.1, 5.3.3]

Explain the importance of personnel accountability. [NFPA® 1001, 5.3.5]

Respond to an incident, correctly mounting and dismounting an apparatus. [NFPA® 1001, 5.3.2; Skill Sheet 2-I-1]

Wearing appropriate PPE, including reflective vest, demonstrates scene management at roadway incidents using traffic and scene control devices. [NFPA® 1001, 5.3.3; Skill Sheet 2-I-2]

Explain the procedures for receiving emergency and nonemergency external communications. [NFPA® 1001, 5.2.1, 5.2.2]

Describe the information required to dispatch emergency services. [NFPA® 1001, 5.2.1, 5.2.2, 5.2.3]

Describe the systems used for internal communications. [NFPA® 1001, 5.2.1, 5.2.2] - 15 -

Explain radio limitations that may impact internal communications. [NFPA® 1001, 5.2.3]

Describe radio procedures used for internal communications. [NFPA® 1001, 5.2.1, 5.2.3]

Handle emergency and nonemergency calls. [NFPA® 1001, 5.2.1, 5.2.2 Skill Sheet 3-I-1]

Use a portable radio for routine and emergency traffic. [NFPA® 1001, 5.2.1, 5.2.3 Skill Sheet 3-I-2]

Fire Science 1

UNIT 2: Fire Behavior and Building Construction

ESSENTIAL QUESTION

How does fire behave and affect different types of structures?

BIG IDEAS

Students will...

- Understand how fire behaves.
- Identify different elements of building construction.

GUIDING QUESTIONS

- Content
 - What are the elements necessary for combustion?
 - What are the stages of fire development?
 - What are the different occupancy classifications?
 - Describe the different building components. (Floors/ceilings/walls, basement/stairs, roofs, doors, windows)
- Process
 - How do firefighters identify various stages of fire development?
 - How do firefighters identify signs of rapid fire development?
 - How do different building components and structure types affect how fire behaves?
 - How do basements and stairs impact firefighting operations?
- Reflective
 - Why is understanding fire behavior important?
 - Why is it important to understand the different types of building construction in your community?

FOCUS STANDARDS

Describe the impact of fire on common building materials. [NFPA® 1001, 5.3.4, 5.3.10, 5.3.12]

Explain the impact of fire on construction classifications. [NFPA® 1001, 5.3.4, 5.3.10, 5.3.12]

List the main types of occupancy classifications.

Describe the basic construction of building components. [NFPA® 1001, 5.3.4, 5.3.10, 5.3.12]

Explain the science of fire as it relates to energy, forms of ignition, and modes of combustion. [NFPA® 1001, 5.3.11]

Describe the impact of thermal energy on heat, temperature, and heat transfer. [NFPA® 1001, 5.3.12]

Recognize the physical states of fuel. [NFPA® 1001, 5.3.10]

Explain the relationship between oxygen and life safety. [NFPA® 1001, 5.3.11]

Identify the products of self-sustained chemical reactions. [NFPA® 1001, 5.3.11]

Explain the factors that affect fire development. [NFPA® 1001, 5.3.11]

Describe the stages of fire development. [NFPA® 1001, 5.3.11]

Recognize signs, causes, and effects of rapid fire development. [NFPA® 1001, 5.3.11] Describe the methods through which fire fighting operations can influence fire behavior. [NFPA® 1001, 5.3.11, 5.3.12]

Fire Science 1

UNIT 3: Personal Protective Equipment

ESSENTIAL QUESTION

How do firefighters protect themselves in hazardous situations?

BIG IDEAS

Students will...

- Understand the importance of personal protective equipment.
- Demonstrate the proper use of structural personal protective clothing and SCBA.

GUIDING QUESTIONS

- Content
 - What are the different elements of structural firefighting gear?
 - What forms of respiratory protection do firefighters use?
 - What does SCBA stand for? (Self-contained breathing apparatus)
 - What are indications for firefighters to exit a structure in an emergency?
- Process
 - How do firefighters operate and maintain respiratory equipment?
 - How do firefighters don and doff structural personal protective clothing?
 - How do firefighters inspect, clean, and sanitize their PPE?
- Reflective
 - Why do firefighters need to understand various types of respiratory hazards?

FOCUS STANDARDS

Describe the purpose of personal protective equipment. [NFPA® 1001, 5.1.1, 5.3.3]

Describe characteristics of each type of personal protective equipment. [NFPA® 1001, 5.3.2]

Summarize guidelines for the care of personal protective clothing. [NFPA® 1001, 5.1.1, 5.3.3, 5.5.1]

Explain safety considerations for personal protective equipment. [NFPA® 1001, 5.3.1]

Identify respiratory hazards. [NFPA® 1001, 5.3.1] Identify types of respiratory protection equipment. [NFPA® 1001, 5.3.1]

Describe the limitations of respiratory protection equipment. [NFPA® 1001, 5.3.1]

Explain methods for storing respiratory protection equipment. [NFPA® 1001, 5.5.1]

Describe general donning and doffing considerations for protective breathing apparatus. [NFPA® 1001, 5.3.1, 5.3.2]

Summarize general considerations for protective breathing apparatus inspections and care. [NFPA® 1001 5.1.1, 5.5.1]

Summarize safety precautions for refilling SCBA cylinders. [NFPA® 5.5.1]

Explain procedures for replacing SCBA cylinders. [NFPA® 1001 5.3.1]

Explain safety precautions for SCBA use. [NFPA® 1001 5.3.1]

Describe nonemergency and emergency exit indicators. [NFPA® 5.3.1]

Describe nonemergency exit techniques. [NFPA® 1001 5.3.1]

Demonstrate the method for donning structural personal protective clothing for use at an emergency.

[NFPA® 1001, 5.1.2, 5.3.1, 5.3.2, 5.3.3, Skill Sheet 6-I-1]

With structural personal protective clothing in place, demonstrate the over-the-head method of donning an SCBA. [NFPA® 1001 5.3.1, 5.3.2, 5.3.3, Skill Sheet 6-I-2]

With structural personal protective clothing in place, demonstrate the coat method of donning an SCBA.

[NFPA® 1001 5.3.1, 5.3.2, 5.3.3, Skill Sheet 6-I-3]

With structural personal protective clothing in place, demonstrate the method for donning an SCBA while seated. [NFPA® 1001 5.3.1, 5.3.2, 5.3.3, Skill Sheet 6-I-4]

Doff personal protective equipment, including respiratory protection, and prepare for reuse. [NFPA® 1001 5.1.2, 5.3.2, 5.3.3, Skill Sheet 6-I-5]

Demonstrate the steps for inspecting an SCBA. [NFPA® 1001 5.3.2, 5.5.1; Skill Sheet 6-I-6]

Demonstrate the steps for cleaning and sanitizing an SCBA. [NFPA® 1001 5.3.2, 5.5.1; Skill Sheet 6-I-7]

Demonstrate the method for filling an SCBA cylinder from a cascade system, wearing appropriate PPE, including eye and ear protection. [NFPA® 1001 5.3.1; Skill Sheet 6-I-8]

Demonstrate the method for filling an SCBA cylinder from a compressor/purifier system wearing appropriate PPE, including eye and ear protection. [NFPA® 1001 5.3.1; Skill Sheet 6-I-9]

Demonstrate the one-person method for replacing an SCBA cylinder. [NFPA® 1001 5.3.1;

Skill Sheet 6-I-10] Demonstrate the two-person method for replacing an SCBA cylinder. [NFPA® 1001 5.3.1; Skill Sheet 6-I-11]

Fire Science 1

UNIT 4: Tactical Equipment and Operations

ESSENTIAL QUESTION

How do firefighters use different techniques and equipment to achieve incident objectives?

BIG IDEAS

Students will...

- Understand and demonstrate the use of firefighting equipment to perform tactical operations.
- Demonstrate how to tie various fire service knots.
- Understand and demonstrate various search techniques.
- Understand and demonstrate various forcible entry methods.

GUIDING QUESTIONS

- Content
 - What are the different fire extinguisher classifications?
 - What are the different fire extinguisher ratings?
 - What are the different types of ropes used by firefighters?
 - What are the various elements of knots?
 - What are the various types of lighting equipment used on fire scenes?
 - What are the basic principles of forcible entry?
 - What are different victim removal and firefighter survival methods?
 - What are the different types of ground ladders used in the fire service?
- Process
 - How do firefighters operate, inspect, and maintain fire extinguishers?
 - How do firefighters inspect, clean, and store rope?
 - How do firefighters determine which knot to use in various situations?
 - How do firefighters hoist and lower equipment using rope?
 - How do firefighters operate, clean, inspect and maintain hand and power tools?
 - How do firefighters perform primary and secondary searches?
 - How do you select, carry, operate, climb, and secure ladders?
 - How do firefighters inspect, clean and maintain ladders?
 - How do firefighters use ground ladders to perform victim rescues?
- Reflective
 - Why is it important to understand different types of extinguishers and when to use them?
 - What are important safety considerations when using ground ladders?

FOCUS STANDARDS

Explain portable fire extinguisher classifications. [NFPA® 1001, 5.3.16]

Describe types of portable fire extinguishers. [NFPA® 1001, 5.3.16]

Define the ratings in a portable fire extinguisher rating system. [NFPA® 1001, 5.3.16]

Explain the considerations taken when selecting and using portable fire extinguishers. [NFPA® 1001, 5.3.16]

Identify procedures used for the inspection, care, and maintenance of portable fire extinguishers. [NFPA® 1001, 5.3.16, 5.5.1]

Operate a stored pressure water extinguisher. [NFPA® 1001, 5.3.16; Skill Sheet 7-I-1]

Operate a dry chemical (ABC) extinguisher. [NFPA® 1001, 5.3.16; Skill Sheet 7-I-2]

Operate a carbon dioxide (CO₂) extinguisher. [NFPA® 1001, 5.3.16; Skill Sheet 7-I-3]

Compare and contrast the characteristics of life safety rope and utility rope. [NFPA® 1001, 5.3.2]

Summarize basic guidelines for rope maintenance. [NFPA® 1001, 5.5.1]

Explain reasons for placing rope out of service. [NFPA® 1001, 5.3.20]

Describe webbing and webbing construction. [NFPA® 1001, 5.3.20]

Describe parts of a rope and considerations in tying a knot. [NFPA® 1001, 5.1.2, 5.3.20]

Describe knot characteristics and knot elements. [NFPA® 1001, 5.1.2, 5.3.20]

Describe characteristics of knots commonly used in the fire service. [NFPA® 1001, 5.1.2, 5.3.20]

Select commonly used rope hardware for specific applications. [NFPA® 1001, 5.1.2, 5.3.20]

Summarize hoisting safety considerations. [NFPA® 1001, 5.1.2, 5.3.20]

Inspect, clean, and store rope. [NFPA® 1001 5.5.1; Skill Sheet 8-I-1]

Tie an overhand knot. [NFPA® 1001 5.3.20; Skill Sheet 8-I-2]

Tie a bowline knot. [NFPA® 1001 5.3.20; Skill Sheet 8-I-3]

Tie a clove hitch. [NFPA® 1001 5.3.20; Skill Sheet 8-I-4]

Tie a clove hitch around an object. [NFPA® 1001 5.3.20; Skill Sheet 8-I-5]

Tie a handcuff (rescue) knot. [NFPA® 1001 5.3.20; Skill Sheet 8-I-6]

Tie a figure-eight knot. [NFPA® 1001 5.3.20; Skill Sheet 8-I-7]

Tie a figure-eight bend. [NFPA® 1001 5.3.20; Skill Sheet 8-I-8]

Tie a figure-eight on a bight. [NFPA® 1001 5.3.20; Skill Sheet 8-I-9]

Tie a figure-eight follow through. [NFPA® 1001 5.3.20; Skill Sheet 8-I-10]

Tie a Becket bend. [NFPA® 1001 5.3.20; Skill Sheet 8-I-11]

Tie a water knot. [NFPA® 1001 5.3.20; Skill Sheet 8-I-12]

Hoist an axe. [NFPA® 1001 5.1.2, 5.3.20; Skill Sheet 8-I-13]

Hoist a pike pole. [NFPA® 1001 5.1.2, 5.3.20; Skill Sheet 8-I-14]

Hoist a roof ladder. [NFPA® 1001 5.1.2, 5.3.20; Skill Sheet 8-I-15]

Hoist a dry hoseline. [NFPA® 1001 5.1.2, 5.3.20; Skill Sheet 8-I-16]

Hoist a charged hoseline. [NFPA® 1001 5.1.2, 5.3.20; Skill Sheet 8-I-17]

Hoist a power saw. [NFPA® 1001 5.1.2, 5.3.20; Skill Sheet 8-I-18]

Summarize the impact of building construction and floor plans on structural search techniques. [NFPA® 1001, 5.3.9]

Explain size-up and situational awareness considerations during structural searches. [NFPA® 1001, 5.3.9]

Summarize safety guidelines for structural search and rescue. [NFPA® 1001, 5.3.9]

Differentiate between primary and secondary search techniques. [NFPA® 1001, 5.3.9]

Recognize basic search methods. [NFPA® 1001, 5.3.9]

Describe victim removal methods. [NFPA® 1001, 5.3.5, 5.3.9]

Explain firefighter survival methods. [NFPA® 1001, 5.3.1, 5.3.5, 5.3.9]

Explain what survival actions firefighters can take when needed. [NFPA® 1001, 5.3.1, 5.3.5]

Describe the actions of a rapid intervention crew or team (RIC/RIT) when locating a downed firefighter. [NFPA® 1001, 5.3.5, 5.3.9]

Demonstrate the procedure for conducting a primary search. [NFPA® 1001, 5.3.9; Skill Sheet 9-I-1]

Demonstrate the procedure for conducting a secondary search. [NFPA® 1001, 5.3.9; Skill Sheet 9-I-2]

Demonstrate the incline drag. [NFPA® 1001, 5.3.9; Skill Sheet 9-I-3]

Demonstrate the webbing drag. [NFPA® 1001, 5.3.9; Skill Sheet 9-I-4]

Demonstrate the cradle-in-arms lift/carry — One-rescuer method. [NFPA® 1001, 5.3.9; Skill Sheet 9-I-5]

Demonstrate the seat lift/carry — Two-rescuer method. [NFPA® 1001, 5.3.9; Skill Sheet 9-I-6]

Demonstrate the extremities lift/carry — Two-rescuer method. [NFPA® 1001, 5.3.9; Skill Sheet 9-I-7]

Demonstrate the actions required for transmitting a MAYDAY report. [NFPA® 1001, 5.2.4, 5.3.5, 5.3.9; Skill Sheet 9-I-8]

Demonstrate the proper procedures for an SCBA air emergency. [NFPA® 1001, 5.3.1, 5.3.5, 5.3.9; Skill Sheet 9-I-9]

Demonstrate the actions required for withdrawing from a hostile environment with a hoseline. [NFPA® 1001, 5.3.5, 5.3.9; Skill Sheet 9-I-10]

Demonstrate low profile maneuvers without removing SCBA – Side technique. [NFPA® 1001, 5.3.1, 5.3.5, 5.3.9; Skill Sheet 9-I-11]

Perform low profile maneuvers without removing SCBA – SCBA- first technique. [NFPA® 1001, 5.3.1, 5.3.5, 5.3.9; Skill Sheet 9-I-12]

Demonstrate the method for breaching an interior wall. [NFPA® 1001, 5.3.5, 5.3.9; Skill Sheet 9-I-13]

Demonstrate the steps for disentangling from debris or wires. [NFPA® 1001, 5.3.5, 5.3.9; Skill Sheet 9-I-14]

Identify types of emergency scene lighting equipment. [NFPA® 1001, 5.3.17]

Explain the basic principles of forcible entry. [NFPA® 1001, 5.3.4] Describe the basic construction of locksets. [NFPA® 1001, 5.3.4]

Describe considerations a firefighter must take when using forcible entry tools. [NFPA® 1001, 5.3.4]

Indicate steps needed to care for and maintain forcible entry tools. [NFPA® 1001, 5.5.1]

Explain the ways to force entry through various types of doors. [NFPA® 1001, 5.3.4]

Identify considerations that need to be taken when forcing entry through locks, padlocks, overhead doors, and fire doors. [NFPA® 1001, 5.3.4]

Describe forcible entry methods used for windows. [NFPA® 1001, 5.3.4]

Explain considerations firefighters must take when forcing entry through miscellaneous types of windows and covers. [NFPA® 1001, 5.3.4]

Describe forcible entry methods for breaching walls. [NFPA® 1001, 5.3.4]

Explain forcible entry methods for breaching floors. [NFPA® 1001, 5.3.4]

Indicate methods for forcing fences and gates. [NFPA® 1001, 5.3.4]

Clean, inspect, and maintain hand tools and equipment. [NFPA® 1001, 5.5.1; Skill Sheet 11-I-1]

Clean, inspect, and maintain power tools and equipment. [NFPA® 1001, 5.5.1; Skill Sheet 11-I-2]

Force entry through an inward-swinging door – Two-firefighter method. [NFPA® 1001, 5.3.4, 5.3.14; Skill Sheet 11-I-3]

Force entry through an inward-swinging door – Cutting the lock out of the door method. [NFPA® 1001, 5.3.4, 5.3.14; Skill Sheet 11-I-4]

Force entry through an outward-swinging door – Removing hinge-pins method. [NFPA® 1001, 5.3.4, 5.3.14; Skill Sheet 11-I-5]

Force entry through an outward-swinging door – Wedge-end method. [NFPA® 1001, 5.3.4, 5.3.14; Skill Sheet 11-I-6]

Force entry using the through-the-lock method. [NFPA® 1001, 5.3.4, 5.3.14; Skill Sheet 11-I-7]

Force entry using the through-the-lock method using the K-tool. [NFPA® 1001, 5.3.4, 5.3.14; Skill Sheet 11-I-8]

Force entry using the through-the-lock method using the A-tool. [NFPA® 1001, 5.3.4, 5.3.14; Skill Sheet 11-I-9]

Force entry through padlocks. [NFPA® 1001, 5.3.4, 5.3.14; Skill Sheet 11-I-10] Use a bam-bam tool. [NFPA® 1001, 5.3.4, 5.3.14; Skill Sheet 11-I-11]

Cut a padlock with a rotary saw. [NFPA® 1001, 5.3.4, 5.3.14; Skill Sheet 11-I-12]

Force entry through a window (glass pane). [NFPA® 1001, 5.3.4, 5.3.14; Skill Sheet 11-I-13]

Force entry through a double-hung window. [NFPA® 1001, 5.3.4, 5.3.14; Skill Sheet 11-I-14]

Force a Lexan® window using a rotary saw. [NFPA® 1001, 5.3.4, 5.3.14; Skill Sheet 11-I-15]

Force entry through a wood-framed wall. (Type V construction) with hand tools. [NFPA® 1001, 5.3.4, 5.3.14; Skill Sheet 11-I-16]

Force entry through a wood wall. (Type V construction) with a rotary saw or chain saw. [NFPA® 1001, 5.3.4, 5.3.14; Skill Sheet 11-I-17]

Breach a wall using a battering ram. [NFPA® 1001, 5.3.4, 5.3.14; Skill Sheet 11-I-18]

Force entry through a masonry wall with hand tools. [NFPA® 1001, 5.3.4, 5.3.14; Skill Sheet 11-I-19]

Force entry through a metal wall with power tools. [NFPA® 1001, 5.3.4, 5.3.14; Skill Sheet 11-I-20]

Breach a hardwood floor. [NFPA® 1001, 5.3.4, 5.3.14; Skill Sheet 11-I-21]

Bridge a fence with a ladder. [NFPA® 1001, 5.3.4, 5.3.14; Skill Sheet 11-I-22]

Describe different construction types of ground ladders. [NFPA® 1001, 5.3.6, 5.3.11, 5.3.12]

Identify the parts of a ladder including markings and labels. [NFPA® 1001, 5.3.6, 5.3.11, 5.3.12]

Recognize the types of ladders used in the fire service. [NFPA® 1001, 5.3.6, 5.3.11, 5.3.12]

Explain the considerations addressed by ladder inspection, cleaning, and maintenance. [NFPA® 1001, 5.5.1]

Describe safety guidelines used when handling ladders. [NFPA® 1001, 5.3.6, 5.3.11, 5.3.12]

Explain considerations taken when selecting, lifting, and lowering a ladder. [NFPA® 1001, 5.3.6, 5.3.11, 5.3.12]

Describe various methods for ladder carries. [NFPA® 1001, 5.3.6, 5.3.11, 5.3.12]

Identify basic considerations and requirements for ground ladder placement. [NFPA® 1001, 5.3.6, 5.3.11, 5.3.12]

Describe various methods for ladder raises. [NFPA® 1001, 5.3.6, 5.3.11, 5.3.12]

Compare procedures for moving ground ladders. [NFPA® 1001, 5.3.6, 5.3.11, 5.3.12]

Explain the methods used to secure ladders. [NFPA® 1001, 5.3.6, 5.3.11, 5.3.12]

Describe ladder climbing considerations. [NFPA® 1001, 5.3.6, 5.3.11, 5.3.12]

Indicate what methods can be used to work from a ladder. [NFPA® 1001, 5.3.6, 5.3.11, 5.3.12]

Explain methods used for assisting a victim down a ladder. [NFPA® 1001, 5.3.6, 5.3.11, 5.3.12]

Clean, inspect, and maintain a ladder. [NFPA® 1001, 5.5.1; Skill Sheet 12-I-1]

Carry a ladder – One-firefighter low-shoulder method. [NFPA® 1001, 5.3.6, 5.3.11, 5.3.12; Skill Sheet 12-I-2]

Carry a ladder – Two-firefighter low-shoulder method. [NFPA® 1001, 5.3.6, 5.3.11, 5.3.12; Skill Sheet 12-I-3]

Carry a ladder – Three-firefighter flat-shoulder method. [NFPA® 1001, 5.3.6, 5.3.11, 5.3.12; Skill Sheet 12-I-4]

Carry a ladder – Three-firefighter flat-arm's length method. [NFPA® 1001, 5.3.6, 5.3.11, 5.3.12; Skill Sheet 12-I-5]

Carry a ladder – Two-firefighter arm's length on-edge method. [NFPA® 1001, 5.3.6, 5.3.11, 5.3.12; Skill Sheet 12-I-6]

Tie the halyard. [NFPA® 1001, 5.3.6, 5.3.11, 5.3.12; Skill Sheet 12-I-7]

Raise a ladder – One-firefighter method. [NFPA® 1001, 5.3.6, 5.3.11, 5.3.12; Skill Sheet 12-I-8]

Raise a ladder – Two-firefighter flat raise. [NFPA® 1001, 5.3.6, 5.3.11, 5.3.12; Skill Sheet 12-I-9]

Raise a ladder – Two-firefighter beam raise. [NFPA® 1001, 5.3.6, 5.3.11, 5.3.12; Skill Sheet 12-I-10]

Raise a ladder – Three- or four-firefighter flat raise. [NFPA® 1001, 5.3.6, 5.3.11, 5.3.12; Skill Sheet 12-I-11]

Deploy a roof ladder – One-firefighter method. [NFPA® 1001, 5.3.6, 5.3.11, 5.3.12; Skill Sheet 12-I-12]

Pivot a ladder – Two-firefighter method. [NFPA® 1001, 5.3.6, 5.3.11, 5.3.12; Skill Sheet 12-I-13]

Shift a ladder – One-firefighter method. [NFPA® 1001, 5.3.6, 5.3.11, 5.3.12; Skill Sheet 12-I-14]

Shift a ladder – Two-firefighter method. [NFPA® 1001, 5.3.6, 5.3.11, 5.3.12; Skill Sheet 12-I-15]

Heel a ground ladder. [NFPA® 1001, 5.3.6, 5.3.11, 5.3.12; Skill Sheet 12-I-16]

Leg lock on a ground ladder. [NFPA® 1001, 5.3.6, 5.3.11, 5.3.12; Skill Sheet 12-I-17]

Assist a conscious victim down a ground ladder. [NFPA® 1001, 5.3.9; Skill Sheet 12-I-18]

Assist an unconscious victim down a ground ladder. [NFPA® 1001, 5.3.9; Skill Sheet 12-I-19]