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Front cover photos feature junior firefighters from (clockwise from upper left): Soldier Township Fire Department, NVFC National Junior Firefighter Academy at Scott Safety (photo courtesy of Ilya Margolis), Soldier Township Fire Department, Westhampton Beach Fire Department, NVFC National Junior Firefighter Academy at Scott Safety (photo courtesy of Ilya Margolis)

Back cover photos feature junior firefighters from (clockwise from upper left): East Norwich Fire Company, Soldier Township Fire Department, Westhampton Beach Fire Department, Los Angeles County Fire Department, Soldier Township Fire Department

Dedicated in memory of Jason and Emma Pisocki of the Solider Township (KS) Fire Department, for their dedication to the fire service and contributions to the development of this guide.

April 2014
Introduction

The National Volunteer Fire Council (NVFC), a nonprofit association representing volunteer fire, EMS, and rescue personnel at the national level, created the National Junior Firefighter Program in 2007 so that departments and youth alike can find the resources, tools, and information they need to help develop, grow, enhance, promote, and participate in local junior firefighter programs.

The Program supports fire departments by fostering relationships and engaging youth in learning about, and ultimately becoming, members of the emergency services. Junior firefighter programs introduce young people to their local fire, rescue, and emergency medical services response organizations in a safe, controlled, educational, and fun way while providing departments with an excellent recruitment mechanism.

Core Competencies for the Junior Fire Service was developed by the NVFC to address the need for safe, functional, and effective training exercises for junior firefighters. The NVFC does not advocate junior firefighters participating in operational activities, but developing safe training behavior and attitudes today lays the foundation for a healthier, safer fire service tomorrow. These training examples address both the hands-on and intangible skills (such as leadership and teamwork) that are vital to the future of the fire service.

For more training ideas, information, and resources, visit the National Junior Firefighter Program web site at www.nvfc.org/juniors. Learn more about the NVFC’s health and safety initiatives at www.nvfc.org.

Acknowledgements

This project was made possible through a grant from the U.S. Department of Homeland Security as part of their ongoing support of first responder health and safety initiatives, including training.

The junior firefighter programs from the Cherryville (NC) Fire Department, East Norwich (NY) Volunteer Fire Company No. 1, Los Angeles County (CA) Fire Department Stations 3 and 54, Soldier Township (KS) Fire Department, and Westhampton Beach (NY) Fire Department were very helpful in creating this handbook, providing a majority of the sample drills and participating in case studies. The NVFC extends special appreciation to the junior firefighters, program advisors, and other members of these departments for their contributions to the future of the fire service.

Several members of the NVFC Health and Safety Committee and the National Junior Firefighter Program Advisory Group lent their expertise to this guide. The NVFC thanks these individuals for their time and involvement: Nick Bailey, FDLiveIn, LLC; Mike Barnett, Elkridge (MD) Volunteer Fire Department Junior Firefighter Program Advisor; Chief Jeff Cash, NVFC First Vice Chair; Allen Metheny, NVFC Secretary/Treasurer – Delaware; Bryant Stiles, NVFC Alternate Director – Kentucky; and Bob Timko, NVFC Alternate Director – Pennsylvania.

Photos (l-r): East Norwich Fire Company, Soldier Township Fire Department, Los Angeles County Fire Department, NVFC National Junior Firefighter Academy at Scott Safety (photo courtesy of Ilya Margolis)

Advisory

The content of this handbook is for informational purposes only. It is not a substitute for any local laws or regulations, nor is it a certification program. Department leadership and/or junior firefighter program advisors are responsible for ensuring that all training is compliant with local, state, and federal regulations. The safety and well-being of junior firefighters and other department members should always be first priority. This handbook should be used at the department’s discretion. The NVFC does not advocate operational response or any activity that puts the health and safety of junior firefighters at risk.

Each state has different regulations and laws concerning the activities in which youth fire service volunteers are allowed to participate. Information can generally be found by visiting your state’s Department of Labor and investigating child labor laws. Your state firefighters’ association or State Fire Marshal’s office is also a good source for information. Check with your department’s insurance provider regarding coverage for youth program activities.

Should you have any questions regarding this matter, please contact the National Volunteer Fire Council at 1-888-ASK-NVFC (275-6832) or juniors@nvfc.org.
NVFC B.E.S.T. Practices

The NVFC has always been dedicated to keeping first responders healthy and safe. The Volunteer Firefighter Health and Safety Priorities were developed by the NVFC’s Health and Safety Committee in 2008 to further the NVFC’s focus on protecting first responders. These priorities are set forth in the following B.E.S.T. Practices:

**Behavior**
- Support the physical, emotional, and mental well-being of all personnel.
- Operate all emergency apparatus and privately owned vehicles (POV’s) to conform to the highest road safety standards and enforce the use of seatbelts.
- Develop, practice, and enforce recommended health and safety standards for all personnel.
- Monitor and ensure that all active emergency scenes maintain the utmost level of safety and fireground accountability.

**Equipment**
- Provide and require the proper use of full personal protective equipment.
- Maintain all equipment based on established safety recommendations.

**Standards and Codes**
- Encourage the use of all smoke, fire detection, and fire suppression devices, including fire sprinkler systems, in all structures.
- Vigorously enforce all fire safety codes and ordinances.
- Obtain apparatus and equipment that meet national safety standards.

**Training**
- Utilize fire training programs that conform to the highest professional standards.
- Operate a safe fire training ground at all times.
- Establish, maintain, and deliver fire safety programs for all age groups.
Youth Personal Development and Behavior

Junior firefighter programs allow youth the opportunity to gain technical skills that they can apply toward a future career or as a volunteer in the fire and emergency services. An equal – if not greater – benefit to youth is the opportunity to develop and build teamwork and leadership skills, confidence, responsibility, and the ability to stay calm in an emergency situation. These and other valuable life skills benefit youth as they navigate their teenage years, and will continue to help them through whichever college/career path they choose and into adulthood. These skills are also important attributes in career or volunteer firefighters, which many junior firefighters will one day become.

Junior firefighter program advisors serve as both a mentor and a coach. In the coaching role, you will instruct, teach, and train junior firefighters. You have to be a motivator, set goals, and evaluate progress. As a coach, you will have to discipline junior firefighters and educate them on their mistakes. You are preparing the future of the fire service – and through appropriate coaching and mentorship, they will respond to their first call as confident, ethically-minded, well-trained adults.

Many of these skills are inherent to training drills and other department and program activities. For example:

**Leadership**
Institute a junior firefighter officer system. Have students elect a Junior Captain, and with guidance, let juniors lead their own meetings, set their own priorities, and develop fundraisers or volunteer events.

**Teamwork**
With guidance, allow seasoned junior firefighters to train new recruits. Focus on inclusion in all drills and activities. For instance, when donning gear, juniors who have already put on all of their gear should immediately assist those who need help getting ready.

**Responsibility**
Allow juniors to take responsibility for their program. Help them set and meet goals in fundraising. Teach them the appropriate methods for caring for and maintaining all gear, apparatus, and equipment. Require notes for absences to instill the importance of honoring commitments.

Community Service
Allow juniors to pursue community service projects not directly related to the fire department. For example, they could organize a holiday food or coat drive, visit people in nursing homes, or participate in a charity fundraiser.

IN PRACTICE: Organize a Food Delivery to Those in Need
Pleasant View (TN) Volunteer Fire Department’s (PVVFD) Explorer Program gives back to their community all year through their support of the fire department, but each holiday season they go even further by helping take care of the town’s elderly and disadvantaged. For several years, Explorers have worked with the department to send fruit baskets and food boxes to those in need on Christmas Eve.

Before the event, the group compiles a list of Pleasant View’s elderly, families that are struggling to make ends meet, and other citizens in need. Explorers, department leaders, and volunteers from local churches gather on December 23 to sort the items that the department has purchased and then prepare the fruit baskets and food boxes. On Christmas Eve, they deliver a basket and a box to each home on the list. They provide almost 50 homes with baskets and food boxes annually. Partnering with the church volunteers allows the department to educate church members about the work they are doing in the community and inform them about the Explorer program.

PVVFD serves a population of 19,000 covering 200 square miles. Their Explorer Program focuses on teamwork, future fire service involvement, Explorer education, and creating community leaders.
IN PRACTICE:
Start an Anti-Bullying Campaign
(Read more about the Westhampton Beach Fire Dept. on page 23)

People feel safer knowing that the fire department in their community is looking out for them. The Westhampton Beach (NY) Fire Department junior firefighters wanted their fellow high school students to know that they are there for them as well.

Building on the national anti-bullying movement and in response to witnessing bullying in their own school, the juniors launched an educational campaign called JAB (Juniors Against Bullying). They have spoken about the program and bullying at county-wide conferences on Long Island, even teaming with a special agent from the FBI when presenting at a conference in their home county. They created a Facebook page (keywords: Westhampton Beach Junior Fireman Bullying) for youth to share their stories, identified themselves as allies so that bullied students know they can talk to them anytime, and scheduled open houses at the fire department to serve as a “safe zone.”

Their campaign has gotten national and international attention, with dozens of departments nationwide reaching out to Westhampton Beach to learn more about starting an anti-bullying campaign.

Work Ethic and Department Values
Train juniors in your department’s mission statement and value system. Emphasize the importance of being a good representative of the program at school, home, and in public. Discuss the responsibility that comes with being a first responder. Encourage juniors to be leaders in all aspects of their lives, not just at the station.

Department Organization and Duties
Teach juniors about the organizational system of your fire department. Invite department leadership to speak about their path to their current position. Emphasize respect for leadership, working with the team, and acting in the best interests of the department and for the job at hand. Teach juniors about duties firefighters/EMTs perform when not on call, and have them contribute to cleaning, cooking, and other chores around the station.
IN PRACTICE: **Promote Fire Safety at a Community Fair**

Each spring, the Great Neck (NY) Alert Fire Company junior firefighter program hosts a booth and fire safety demonstration at the Village of Great Neck Street Fair to educate youth and adults about how to safely escape a house fire.

The Street Fair is one of Long Island’s largest arts and crafts events of the year, stretching over a half-mile and featuring more than 200 vendors. The Great Neck juniors take advantage of this popular event to educate kids and their parents about how to stay calm and escape a fire. They do this through a “smoke trailer,” a mock house that is partially filled with light smoke. Junior firefighters give participants an overview of escaping a house fire and then let them into the smoke house to practice what they learned.

Inside the house, participants are told to call a fake emergency number with the provided telephone. A junior firefighter answers the call as if it was an actual emergency call and helps the participant make their way to the window while staying low to avoid the smoke. Other juniors wait outside the window with a 3-step ladder, and participants then lower themselves out the window and down the steps to the waiting firefighters. Over 500 people go through the smoke trailer each year, and many come back a second time.

In addition to the smoke house, the Great Neck juniors staff a booth and hand out fire prevention and safety information during the Street Fair. They demonstrate different firefighting and rescue tools to show how first responders do their jobs. Visitors can also take a tour of one of Great Neck’s fire trucks.

**Fire Prevention and Safety Outreach**

An important part of reducing the loss of property, environment, and lives (both civilian and first responder) due to fire is educating the public in fire prevention and what to do in case of emergency. Junior firefighters can coordinate and staff community outreach events to teach fire safety and prevention. They can volunteer at local schools, visit nursing homes and hospitals, and attend fairs and other events to spread this information.

Examples of activities include helping citizens create a fire escape plan in their homes, offices, and schools; distributing and inspecting smoke alarms; and teaching children what to do in case of a fire in their home. Find more activity ideas and resources from the United States Fire Administration (www.usfa.fema.gov/fireservice/subjects/fireprev/index.shtm), the National Fire Protection Association (www.nfpa.org), and Fire Corps (www.firecorps.org/departments/grow-a-program).
IN PRACTICE:
Start Meetings with Physical Training
(Read more about the L.A. County Fire Dept. Explorers on page 25)

The Los Angeles County Fire Department Stations 3 and 54 make fitness a big part of their Explorer Post meetings. Every Sunday, they start their training before 8am with juniors lining up and standing at attention. After a thorough inspection of uniforms and stance, they run to their turnout gear. Students who don their gear the quickest are responsible for helping others put theirs on, so that everyone is in full gear when the timer runs out. They then do push-ups in full gear. Next, they doff the turnout gear and change into athletic clothes to run two miles. After a break, they start a series of fitness challenges that simulate skills needed for firefighting, such as a hose pull, hitting tires with sledgehammers, and pulling a dummy bag.

Once these drills are completed, they change back into uniform and go through revolutions on ropes, EMS, ladders, and other first response activities. Their junior firefighter program advisor ends the meeting with a reminder to eat a nutritious lunch to maintain the hard work that they’ve done that morning and fuel their body and mind for the week ahead.

Leading a Healthy and Safe Lifestyle
Youth are impressionable. The ideas, behaviors, and skills they learn now will stay with them through life. With heart attack the leading cause of on-duty firefighter fatalities, it is critical to emphasize physical fitness as part of a firefighter’s duty. The body is the most important tool a firefighter has at his or her disposal, and without proper training, they will not be ready for the next call. In addition, proper training will help reduce the number of firefighter injuries. The NVFC’s Heart-Healthy Firefighter Program (www.healthy-firefighter.org) and other health and safety initiatives (www.nvfc.org) provide tools, resources, and training on nutrition, fitness, and vehicle safety, among other health and safety topics. Consider implementing a workout component in your regular trainings and take time to emphasize the importance of a healthy and safe lifestyle.

Tie a pike pull to a weight, then simulate picking at a ceiling to work on arm strength.
Technical Skills Overview

Many junior firefighter programs’ primary goal is to train juniors on the technical skills necessary to pass Firefighter I and Firefighter II. The following skill areas correspond to leading standards requirements for passing basic firefighting exams. Under each skill area, you will find the page number for applicable training drills related to this skill set, as detailed in Section III of this guide.

Fire Behavior
A key component of fighting fire is understanding how it behaves. Many juniors will not be able to approach live fires (due to state and local laws), but classroom work can be done to explain the chemistry and physics of fire, sources of heat, combustion, and more.

Drills: page 16, 19

First Aid
Train juniors on basic first aid, cardiopulmonary resuscitation (CPR), and Automatic External Defibrillator (AED). EMTs in your department may be able to lead the training, or work with your local hospital or American Red Cross to offer a certification course.

Drills: page 19

Portable Extinguishers
Junior firefighters should be trained on the inspection, operation, and application of various sizes and types of fire extinguishers. This training should include the types of fires on which extinguishers can be used, the types of extinguishers available, and safety points.

Drills: page 16

Rehabilitation
Junior firefighters can greatly help on-duty firefighters by performing on-scene canteen services and rehab. Juniors can set up a station for water and food, chairs, cooling items such as a canopy for shade or misting fans, and medical monitoring. In addition, they can lay out tools, refill air packs, and clean tools and packs after use.

Drills: page 12

Fire Department Communications
Review procedures for reporting an emergency, your department’s dispatch system, and radio and communications codes. Review how to use a radio and any other department communication tools. Discuss reporting and chain of command.

Drills: page 13, 14, 17, 20

Donning Personal Protective Equipment
NFPA standards require that firefighters be able to don personal protective equipment (PPE) in under one minute. Junior firefighters should also be educated on donning gear, cleaning and maintaining all PPE, and current PPE-related standards and codes.

Drills: page 11

Donning SCBA and Proper Usage
Demonstrate donning and activating self-contained breathing apparatus (SCBA). NFPA standards require that firefighters be able to don the SCBA in less than one minute. Juniors should understand breathing techniques and the safety features of the devise. Proper maintenance and refilling should also be demonstrated.

Drills: page 11

Apparatus
Show juniors how to mount and dismount apparatus, emphasize the importance of seatbelt use on fire department apparatus and in personal vehicles, and demonstrate safety features on all apparatus. Discuss proper usage of sirens, driving safety, adhering to traffic laws, and department SOGs relating to safe vehicle operations. Discuss the importance of proper maintenance of the apparatus.

Drills: page 17, 19

Equipment
Demonstrate various firefighting tools (halligan bars, axes, crowbars, etc.) and their uses. Junior firefighters should understand procedures for replacing and cleaning gear and equipment after use, maintaining gear and apparatus, and timing for replacing equipment. (Note: The NVFC offers a downloadable equipment management template and equipment management webinars at www.nvfc.org.)

Drills: page 11, 12, 13, 16, 19
Hoses and Nozzles
Junior firefighters should understand the components of a hose and nozzle, unrolling and advancing a hose line, opening and closing a line, and fire streams and water pressure. They should learn how to communicate with a team while advancing a line.
Drills: page 13, 17, 18, 20

Water Supply Operations
Demonstrate locating and utilizing fire hydrants, connecting the pumper to the hydrant, and identifying alternate water sources.
Drills: page 17, 18

Ropes and Knots
Talk to junior firefighters about the role of ropes and knots in the job of a firefighter, including rescue and rappelling. Demonstrate the types of knots used in various situations.
Drills: page 21

Ladders
Junior firefighters should be able to use ground ladders safely, including raising, extension, and determining stability.
Drills: page 13

Search and Rescue
Demonstrate proper communications, tools, and hose and ladder usage for a search and rescue situation. Show junior firefighters how to use thermal imaging cameras, halligan bars, and other tools. Emphasize first responder safety when conducting a rescue.
Drills: page 12, 13, 14, 15, 19, 21

Forcible Entry
Teach junior firefighters the various tools available for forcible entry, the types of situations calling for forcible entry, and different methods for forcible entry depending on the situation.
Drills: page 13

Ventilation
Educate junior firefighters on vertical, horizontal, hydraulic, and mechanical ventilation techniques and tools. Discuss the importance of ventilation for clearing smoke from a structure. Emphasize safely removing glass and other obstructions.
Drills: page 19

Accountability and Emergency Evacuation
Emphasize the importance of the safety of the entire team. Review accountability systems, communications, and emergency evacuation methods. Utilize an accountability system with your juniors while training to reinforce the habit.
Drills: page 21

Automobile Extrication
Review the firefighter’s role in automobile accident response. Discuss stabilizing the vehicle, removing and treating the victim, and safety aspects of auto extrication. Demonstrate using extrication tools (complying with safety standards and local, state, and national laws for junior firefighters). Review vehicle components and extrication methods.
Drills: page 19

Traffic Control
Review first responder duties for traffic control at an automobile accident scene or other roadway situation, following all Department of Transportation guidelines. Discuss safety and proper vest usage. Demonstrate using flares and other tools. (Please note that junior firefighters should not participate in any active traffic control situations.)
Training

The following drills and lesson plans will teach students the skills outlined in Section II. A junior firefighter program should be fun, but most importantly it should be a safe, educational environment for youth. Drills should focus on accurate response to ensure proper training for the future. Explain to juniors why activities should be done in a certain way to avoid injury or fatality while training and in a real-life situation. Unsafe actions should be stopped and disciplined immediately, and used as an educational opportunity. It is the responsibility of the junior firefighter program advisor and/or department leadership to follow all applicable laws and regulations – as well as using good judgment on the scene to prevent unsafe situations. Advisors should train juniors to also be aware of safety issues, encouraging them to correct unsafe actions of their peers.

Teaching junior firefighters the correct, safe way to complete tasks is of utmost importance. Most of these youth will join their local department when they reach the required age; the methods you teach them now will be well ingrained. Take the time to correct mistakes and make sure that all youth know how to safely and accurately complete a drill.

Remember to check with your local and state laws and regulations prior to carrying out any new drill.

Donning PPE

*Courtesy of the Cherryville Fire Department*

**Skills:** Donning PPE, Donning SCBA, Safety

**Facility:** Indoor or outdoor space

**Props:**
- Turnout gear
- Face pieces (including hoods)
- Fire gloves
- Stopwatches
- Air packs
- Wipes for cleaning masks

**Lesson:**
Review the various pieces of personal protective equipment, proper donning, and how to use an SCBA.

Practice:

1. Junior firefighters should stand beside their turnout gear and air packs with their backs away from their gear.

2. A whistle will start the scenario and the junior firefighters can begin donning their personal protective equipment.

3. Once the junior firefighter has gotten all the equipment on and is breathing air from the SCBA, they will raise their hands and the advisor/judge will record their time.

4. The judge will inspect the equipment with all violations adding 7 seconds to the overall time. Violations include helmet strap not being buckled, neck strap on turnout gear not attached, air pack straps not tightened or unbuckled, hood not over ears, air pack buckle not in the center of the waist, coat not zipped, or suspenders not on. Ask other juniors to help identify violations to reinforce learning.
**Equipment Tarp Setup**
*Courtesy of the Cherryville Fire Department*

**Skills:** Equipment, Rehabilitation, Teamwork

**Facility:** Indoor or outdoor, near apparatus

**Props:**
- Tarp
- Apparatus with equipment loaded

**Lesson:**
1. Tarp selection
   a. Inexpensive tarp
   b. Highly visible tarp
   c. Location of tarp on apparatus
2. Tarp placement
   a. Proximity to apparatus
   b. Brightest side upward
3. Apparatus familiarization/equipment to tarp
   a. Needed equipment
   b. Locations of equipment on apparatus
   c. Safely transporting equipment
   d. Placing equipment on tarp
4. Clean up
   a. Returning equipment to apparatus
   b. Folding and storing tarp

**Practice:**
Review steps 1-4 above, walking through how to complete each task. Once juniors are familiar with the process, time groups of juniors on setting up a tarp, adding time for any forgotten equipment or incorrectly placed items.

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**Thermal Imaging Camera**
*Courtesy of the Cherryville Fire Department*

**Skills:** Fire Behavior, Search and Rescue, Equipment

**Facility:** Building with multiple dark rooms

**Props:**
- Thermal imaging cameras (one per group)
- Helmets and sets of fire gloves (one per member of group)
- Stopwatches
- 4 empty drink bottles (2 with hot water, 2 frozen)
- 2 air packs (1 full, 1 empty)
- 2 five-gallon buckets (one filled halfway with ice water, one filled three quarters full with room-temperature water)
- 1 half-filled propane cylinder
- 1¼ hose line (charge flowing water)
- 1 extinguisher prop with full propane tank and lighting stick

**Lesson:**
Program advisors should demonstrate how the cameras show fire extinguishment, water stream success, and what a RIT, RIC, or FAST team should look for to find a downed firefighter.

**Practice:**
1. Advisors should create a blacked-out room(s) in the fire department or other training building, taping up the windows or using other methods to block all light. Add obstacles by moving around furniture, placing dummies, or building a maze. Place hot and cold objects around the rooms.
2. Junior firefighters will be placed in small groups with a check list of all the hot and cold items they are to locate in the room or building. They should also look at the buckets, propane tank, and hose lines to show the fluid levels and whether the hose line is flowing water or not.
3. Junior firefighters can compete to see who can find the most items on the checklist in the shortest amount of time.
Forcible Entry  
*Courtesy of the Westhampton Beach Fire Department*

**Skills:** Forcible Entry, Teamwork, Equipment  
**Facility:** Classroom  
**Props:**  
- Door  
- Tools for demonstration  
**Lesson:**

1. **Size-up the door**  
   a. Type of door – outward- or inward-swinging  
   b. Is the door locked?  
2. **Forcible entry tools:**  
   a. Flat head ax  
   b. Halligan bar  
3. **Parts of the halligan bar:**  
   a. Handle  
   b. Fork end  
   c. Point  
   d. Adze end (blade)  
4. **Positions of firefighters:**  
   a. Those using a halligan stand to the side of the door, placing one end of the tool in the door jam.  
   b. Those using the axe get down on one knee to hit the halligan bar. Kneeling down gives better control of the swing and a better view of the tool.  
5. **Control the door while forcing it.**

**Practice:**  
Review the lesson then utilize this information to complete the Upstairs/Downstairs Search drill in this guide.

Upstairs/Downstairs Search  
*Courtesy of the Westhampton Beach Fire Department*

**Skills:** Forcible Entry, Search and Rescue, Hoses and Nozzles, Ladders, Communications, Teamwork  
**Facility:**  
- Room in station to use for search  
- Stairs (can lead to room other than the room where the search is taking place – this is just for practice descending/ascending stairs)  
- Door for forcible entry  
**Props:**  
- Turnout gear, including air packs, hoods, and blacked-out face pieces  
- 1¾ hose  
- Pike pole, halligan bar, hook, or other tool for sweeping during search  
- Apparatus  
- Ladder  
**Lesson:**

1. Incident command  
   a. Scene safety  
   b. Size-up  
   c. Communication  
2. Hydrant connection from engine  
3. Forcible entry to basement  
4. Ladders  
5. Attack team to basement  
6. Search demonstration  
7. Rescue of victim demonstration  
**Practice:**

1. Divide juniors into three groups. Each group should have an officer. Rotate groups through each stage of the drill as time permits.  
2. Stage one – Demonstrate hose connection and stretch to basement.  
3. Stage two – Demonstrate forcible entry and perform search. Stabilize victim and remove from scene.  
4. Stage three – Demonstrate ladder raise to second floor.

Westhampton Beach junior firefighters with their rescued “victim.”
Attic Rescue
*Courtesy of the Soldier Township Fire Department*

**Skills:** Search and Rescue, Communications

**Facility:** Indoor or outdoor space

**Props:**
- “Attic” constructed of scrap wood (see photos below)
- Charged hose line
- Full gear
- Face masks, blacked-out
- Air packs (if juniors choose to use them)

**Lesson:**
Review the principles of search and rescue and discuss the specifics of attic rescue and maneuvering in small spaces while in full gear.

**Practice:**
1. Pass the charged hose line through the obstacle course in the path that you want the junior firefighter to follow.
2. Situate junior, with blacked-out face mask on, at the entrance of the maze. They should follow the hose through the maze. Program advisors and/or other junior firefighters can help guide them through by explaining what steps to take next, which direction to turn, etc.
3. The goal is to reach the end of the obstacle course. Once juniors are familiar with the course, you can ask them to go the opposite direction or carry a “victim” prop to further challenge them.

The obstacle course has an angled platform, attic trusses, attic opening or crawl space opening, 16-inch centered studded wall, 20-inch low clearance opening, 24-inch round opening, and an 18-inch low clearance 4-foot crawl with entanglement. All or part of these parts of the prop can be used. The total cost to build was less than $200.
Cone Test  
*Courtesy of the Cherryville Fire Department*

**Skills:** Search and Rescue  
**Facility:** Outdoor or indoor space at least 50 feet long  
**Props:**  
- Turnout gear, blackened out face pieces (including hoods), and fire gloves  
- 3-5 traffic cones  
- Stopwatches  
- Tape measure  
- Wipes for cleaning masks  

**Lesson:**  
Teach juniors about search patterns and working in low-light situations.

**Practice:**
1. Place a cone 50 feet directly in front of participants in full turnout gear with a blacked-out face piece on.  
2. The junior firefighter will start on their hands and knees and crawl for no more than one and a half minutes to try and find the cone in front of them. When they hit the cone, their time is recorded.  
3. If they do not reach the cone, the mask is taken off to show how far off center they crawled. The test shows that firefighters in a dark building cannot crawl in a straight line. This demonstrates the importance of using search patterns that orient themselves and their teams to the wall or hose line.

Tire Test  
*Courtesy of the Cherryville Fire Department*

**Skills:** Communications, Search and Rescue, Teamwork, Safety  
**Facility:** Large indoor area or outside  
**Props:**  
- 2-4 sets turnout gear and fire gloves (based on number of participants)  
- 1-4 blacked-out face pieces (including hoods)  
- 3-5 air packs  
- 9-18 tires  
- Stopwatches  
- Wipes for cleaning masks  

**Lesson:**  
Review search patterns, working in low-light situations, and communicating with a team.

**Practice:**
1. Arrange the tires in a large pattern.  
2. Place teams of two junior firefighters (with blacked-out face pieces on) at a tire and ask them to crawl through the pattern, touching each of the tires. They should maintain contact with their partner at all times.  
3. Time each group.
Fire Extinguishers  
*Courtesy of the Cherryville Fire Department*

**Skills:** Fire Extinguishers, Fire Behavior, Equipment

**Facility:** Outdoor space for using extinguishers

**Props:** Various sizes and types of fire extinguishers; small controlled fire for practice

**Lesson:**

1. **Types and applications**
   a. Class A - fires involve materials such as wood, paper, and cloth, which produce glowing embers or char
   b. Class B - fires involve flammable gases, liquids, and greases, including gasoline and most hydrocarbon liquids, which must be vaporized for combustion to occur
   c. Class C - fires in live electrical equipment or in materials near electrically powered equipment
   d. Class D - fires involve combustible metals, such as magnesium, zirconium, potassium, and sodium
   e. Combination - such as ABC or BC

2. **Markings**
   a. Classification markings located on the front of the shell
   b. Markings must be legible from a distance of 3 feet

3. **Inspection and maintenance**
   a. Monthly checks for:
      i. Inspection tag
      ii. Anti-tamper seal
      iii. Weight or pressure check
      iv. Damage or missing parts
      v. Rust or corrosion
   b. Maintenance
      i. Remove from service and place a spare in location
      ii. Only trained and certified personnel may repair or fill extinguishers

4. **Extinguisher use**
   a. Only when use does not present personal hazard
   b. **PASS System**
      i. **P** - Pull Pin
      ii. **A** - Aim at base of fire
      iii. **S** - Squeeze the actuating handle
      iv. **S** - Sweep from side to side
   c. Class C fires: Turn off power - never touch electrical equipment or boxes with any part of the extinguisher; shock hazard
   d. Never allow a full or empty extinguisher to stand upright - falling cylinder could break off valve and cause a missile hazard
   e. Never place an empty or partially discharged extinguisher back in its original location - replace with a fully charged extinguisher
   f. Report any damaged or missing extinguishers

**Practice:**
Review lesson and then utilize information learned to practice with fire extinguishers.

*Cherryville junior firefighter practice using fire extinguishers to put out a controlled fire.*
Hose Pull

Courtesy of the Cherryville Fire Department

Skills: Hoses and Nozzles, Communications, Apparatus, Teamwork, Water Supply Operations

Facility: Outdoor space near apparatus

Props:
- Fire apparatus
- Fire attack handline
- Fog or smoothbore nozzle
- Apparatus pump operator
- Radios to communicate when to charge line
- Extra personnel to re-rack hose lines

Lesson:
1. Different types of hose lays (ex. Flat load, triple lay, reverse horseshoe, etc.)
2. Positive and negatives of each type
3. Hose lays and location on each different apparatus
4. Importance of flaking hose out near entrance to avoid getting hung up
5. Importance of making sure all hose is out of the hose bed
6. Importance of bleeding line and checking for proper stream before making entry

Practice:
1. Grab the nozzle from the hose bed (on a flat load).
2. Begin to pull nozzle and walk away from the truck.
3. Walk past the fire until all the hose is out of the hose bed.
4. Approach the fire entrance with the nozzle while flanking hose behind you in an according fashion.
5. Tell apparatus operator to charge the line.
6. Open nozzle to bleed off air and check the stream.
7. Close nozzle and back away.

Top photo: Westhampton Beach Fire Department junior firefighter practices rolling hose. Middle and bottom photo: Junior firefighters at the Cherryville Fire Department practice hose lays.
Foam Training
*Courtesy of the Cherryville Fire Department*

**Skills:** Hoses and Nozzles, Water Supply Operations

**Facility:** Outdoor space near apparatus

**Props:**
- Fire apparatus
- Fire attack handline (no more than 200 feet)
- Foam
- Apparatus pump operator
- Foam nozzle
- Foam inductor

**Lesson:**
1. Foam uses (fire control and salvage and overhaul)
2. Foam application methods (roll on, banking, and rain down methods)
3. Foam types and what type of fire each is used for
4. How foam is produced from truck to nozzle
5. Importance of keeping a foam seal (not allowing people and trucks to go through foam blanket and break it up)
6. Importance of knowing how much foam you might need (because if you run out once you’ve started, you wasted it)

**Practice:**
1. Pull fire attack handline.
2. Place inductor on apparatus discharge.
3. Hook attack line to inductor.
4. Hook foam nozzle to other end of the handline.
5. Set inductor percentages based on foam type and needed percentages.
6. Begin flowing foam using one of the three methods.

*Junior firefighters practice using foam as a fire suppressant at the Cherryville Fire Department.*
Ventilation
Courtesy of the Cherryville Fire Department

Skills: Ventilation, Fire Behavior, Equipment, Apparatus, Safety

Facility: Building with an exterior door, outdoor training space

Props:
- PPV fan
- Fuel for fan
- Apparatus pump operator

Lesson:
1. Importance of ventilation and why we do it
2. Difference in natural and forced ventilation
3. Situations when we should use forced ventilation
4. Types of forced ventilation
5. Importance of positive pressure fan and creating a seal with a doorway
6. How PPV need compartmentalization to force smoke out (small areas over large areas)
7. Importance of air monitoring afterwards to ensure safe environment

Practice:
1. Place PPV fan in position in front of door way.
2. Properly crank the fan.
3. Check seal on door by feeling top and bottom of door frame.
4. Compartmentalize to move air smoke one room at a time.
5. Shut fan off properly.

EMS and First Aid
Courtesy of the East Norwich Volunteer Fire Company No. 1

Skills: First Aid, Search and Rescue, Automobile Extrication

Facility: Indoor or outdoor space

Props:
- Backboard and strap system
- Head blocks
- Bandages and gauze
- Splint
- Blood pressure cuff
- Stethoscopes
- Pen light
- Disposable gloves
- Tourniquet
- Dummy for CPR practice
- Airway management tools

Lesson:
1. Demonstrate CPR; consider providing certification course to juniors through American Red Cross or other organization
2. Demonstrate AED use and discuss procedures
3. Review basic anatomy and procedure for initially approaching a victim
4. Demonstrate various first aid activities, such as looking at a patient’s eyes, taking blood pressure, listening to a heartbeat, putting an arm in a splint, and using a tourniquet

Practice:
1. Have a volunteer lie on the floor and let other juniors properly stabilize and get ready for movement to ambulance.
2. Let juniors practice using splits and tourniquets on each other.
3. Practice CPR and AED usage.
Multi-story Fire Simulation

Courtesy of the Soldier Township Fire Department

Skills: Communications, Water Supply Operations, Hoses and Nozzles

Facility: Outdoor multi-story training building or other structure that can get sprayed down

Props:
- Apparatus
- Hose line
- Turnout gear for each junior on hose line
- Traffic cones or empty buckets

Lesson:
1. Review fire behavior and the principles of fighting a multi-story fire
2. Review hose line operations and communications

Practice:
1. Set traffic cones in windows of training building or at various heights on other buildings/structures.
2. Have three to four juniors get on the hose line. They should open the line, advance on the fire while communicating with the team, and adjust the nozzle while aiming at the cones in various locations until the cone falls over.
3. Juniors should rotate through the line to practice being at the front and back of the line.

Soldier Township Fire Department junior firefighters use cones to simulate a multi-story fire.
Bailout System

*Courtesy of the East Norwich Volunteer Fire Company No. 1*

**Skills:** Ropes and Knots, Safety, Search and Rescue, Accountability and Emergency Evacuation

**Facility:** Engine bay with ladder truck or other platform (following state and local height restrictions for youth) with area to secure rope

**Props:**
- Lifeline rope
- Carabiners
- Turnout gear (one set per student, or share), including hoods and gloves

**Lesson:**
1. Review importance of bailout systems and using ropes only once in emergency situations
2. Review ropes and knots, how to rappel using a rope and knot system, and safety considerations for escaping using a bailout system
3. Situations when we should use a bailout system
4. Other methods of escape from a hazardous situation

**Practice:**
1. Juniors should be in full turnout gear. Program advisors should position themselves with at least one person on the ladder truck or other platform and at least one person on the ground. Juniors should climb up to the platform one by one.
2. At the top, program advisor will review system and let the junior set up their rope. They will correct any errors and check for safety.
3. Check for ground clearance and then junior will swing off the platform using the bailout system and lower themselves down to the ground below.

East Norwich Fire Company junior firefighters practice a bailout system drill.
Case Studies

Over one million first responders, both volunteer and career, protect our nation from disasters large and small every day. Fire departments have different resources available to them, different guidelines and regulations depending on their location, and different weather patterns to consider. All of these departments are joined in the mutual goal of protecting life, environment, and property.

The following departments represent youth programs from a variety of paid, combination, and volunteer departments; geographic locations; and population sizes. Yet each of these featured locations offer an exemplary junior firefighter program that is producing the next generation of fire service leaders. Their training drills and other department activities are listed throughout this guide. For more information about any of these programs, please contact the NVFC at juniors@nvfc.org or 1-888-ASK-NVFC (275-6832).

**East Norwich Volunteer Fire Company No. 1**
*Location: East Norwich, NY*
*Department type: Volunteer*
*Year program founded: 1993*
*Number of enrolled junior firefighters: 29*
*Age range: 12-17*

The East Norwich Volunteer Fire Company junior firefighters focus on a mix of training and community service initiatives. They usually meet twice and have one to two special events per month. Many of their trainings are specific to their location on Long Island, NY, just outside of New York City. In fact, many of the firefighters are current or former Fire Department of New York City personnel.

One important drill lets juniors practice bailout systems. In 2005, several firefighters were killed when completing a rescue on the 5th floor of an apartment building and had no way to get out. All departments serving areas with high-rise buildings in the New York City area now focus on having the tools and training to be able to rappel out of tall buildings. To safely simulate this activity, department leaders use a ladder truck platform as the “window” of a tall building and hook a rope through the ceiling. Juniors in full gear (no air packs) climb up one by one and review procedure before swinging off the platform and lowering themselves to the ground eight feet below. Program advisors stand on the platform and on the ground below to provide assistance.

Being on an island, they have also visited a local SCUBA diving center for SCUBA training. The instructors at the Dive School teach the juniors about dive and water rescue techniques and water and pool safety. They return once a year for a refresher.

In addition, junior firefighters took a field trip to nearby John F. Kennedy International Airport in New York City. Airport firefighters showed them the command center and airport apparatus, and then they observed a mock airplane crash fire suppression.

Junior firefighter program advisor Jerry Presta has led the program since 1999 and has grown the program from 6 to 37 juniors. He believes strongly in proper training to help develop future leaders. “Training makes them ahead of the game,” he said.

Find out more about the East Norwich junior firefighter program at [www.enjuniors.com](http://www.enjuniors.com).
Westhampton Beach Fire Department
Location: Westhampton Beach, NY
Department type: Volunteer
Year program founded: 2004
Number of enrolled junior firefighters: 30
Age range: 12-18

The Westhampton Beach Fire Department, which was named the 2010 NVFC Junior Firefighter Program of the Year, is located on the southeastern shores of Long Island, NY. The first junior firefighter program at the department was formed in 1904 and consisted of firefighters-in-training who helped move equipment and hook up horse-drawn apparatus to the pump. The area is quiet in the winter and bustling during summers as people from around the world visit the beaches. Their modern junior firefighter program is at its capacity of 30 individuals, with 8 currently on the waiting list.

The Westhampton Beach Junior Fire Department members meet twice each month, followed by training which is built around Firefighter I curriculum. They complete multi-part drills using the space they have available at the department in addition to an off-site training facility. For example, they hold basement rescue drills at the department, breaking it into parts and using each floor of the station. Juniors practice forcible entry and search patterns using a stairway down to a utility room, then head upstairs and use part of the meeting room for the “basement” search. They then stabilize and remove the “victim” from the scene.

In addition to hands-on training, the Westhampton juniors coordinate many different fundraisers and other events to benefit their community. These include spearheading a rock concert that raised over $6,500 for a veterans organization, offering a fire safety puppet show to local home-schooled and elementary school children, and holding an annual car wash that has raised over $10,000 to date for the local burn center.

In 2011, building on the national anti-bullying movement, they created an anti-bullying campaign called JAB (Juniors Against Bullying) that has received national and international attention and has helped provide a safe-haven for multiple local teens.

The Westhampton junior firefighters impact the entire community as they train to become first responders. Program Advisor Paul Hoyle insists that the juniors are the ones really making the program great. Learn more at www.westhamptonbeachfd.org.
**Cherryville Fire Department**  
*Location: Cherryville, NC*  
*Department type: Combination*  
*Year program founded: 1983*  
*Number of enrolled junior firefighters: 12*  
*Age range: 15-17*

The Cherryville Fire Department junior firefighter program, which was named the 2012 NVFC Junior Firefighter Program of the Year, is targeted toward recruiting new firefighters – and it’s paying off. Approximately 90 percent of their junior firefighters continue in the fire service after high school. In fact, program coordinator Chris Cash was the first junior firefighter in the department in 1983.

The Cherryville junior firefighters follow a yearly training schedule that focuses on safe, effective training through hands-on drills and classroom training. They cover donning and doffing personal protective equipment, deployment of hose and appliances, personal safety, first aid, smoke reading, and more. In a single year, the 12 junior firefighters in the program complete approximately 1,200 hours of scheduled training.

A typical training might include a classroom session followed by a four-part evolution. In the classroom, each of the four drills is explained and safety considerations are addressed. The group then moves to the engine bay and gets into their turnout gear. They learn how to advance hose line into proper placement, then move to putting out a fire in a propane-fueled burn pan using fire extinguishers. Next, they learn to operate a ventilation fan and discuss the importance of ventilation on the fire scene. Finally, they learn how to deploy an equipment tarp.

Community outreach is another important component of the program. Each October, the Cherryville junior firefighters play a crucial role in providing a fire prevention day for the approximately 3,500 students in their local schools. During the event, they help with logistics as well as educate their peers about fire safety and prevention. They also help with fire prevention through a free smoke detector program for low income and elderly community members.

The Cherryville junior firefighters are taught that their role as a firefighter doesn’t end with fighting fires, but also involves helping and serving their community in any way possible. Learn more about the Cherryville Fire Department at www.cherryville.com/fire.

**Soldier Township Fire Department**  
*Location: Topeka, KS*  
*Department type: Combination*  
*Year program founded: 2010*  
*Number of enrolled junior firefighters: 10*  
*Age range: 14-19*

The Soldier Township Fire Department Explorer Post has done a lot since they were founded just a few years ago. They help their Topeka, KS, area department with multiple tasks, perform training activities, and coordinate fundraisers.

One of their drills simulates an attic situation. Their program built a maze with repurposed lumber for a total of $28. Students go through the maze with a blacked-out face mask on and in full gear (including SCBA if they choose).

They also train on hoses using an old training structure behind the department. The structure is no longer used for live fire training, but can be used for the junior firefighter program’s purposes. Advisors place orange traffic cones in the windows of each of the three stories. Juniors advance and aim to knock the cones out of the windows, practicing teamwork and communications in the process.
At a fire scene, the juniors help with rehab, equipment, breakdown, and cleanup. At the department, they assist in writing burn permits and answering the phones. Juniors are required to attend all Explorer Post meetings and after a probationary period, they are also allowed to attend fire department meetings. When the station’s basement needed renovations, the Explorers helped hang drywall. They have also participated in mock wrecks as “victims” during fire department trainings.

The juniors help raise funds through the department’s annual pancake feed and “Rent-an-Explorer” program, where juniors assist local community members with household tasks and yard work for a donation.

Learn more about the Soldier Township Fire Department, at www.facebook.com/StfdExplorerPost7700.

Los Angeles County Fire Department Stations 3 and 54
Location: Los Angeles, CA (Station 3) and Southgate, CA (Station 54)
Department type: Career
Year program founded: 1998
Number of enrolled junior firefighters: 86 (combined)
Age range: 15-21

The Los Angeles County Fire Department Stations 3 and 54 Explorer Posts have just under 90 juniors – and still have to turn down applications. Like most junior firefighter programs, the Post raises all of its own funding for uniforms and activities through fundraisers and donations. Many of the Explorers also hold part-time jobs in addition to the time they spend at the station.

There are over a dozen Explorer Posts in Los Angeles County; Stations 3 and 54 are in the southeastern part of the county. Explorers train to develop their skills to participate in the Los Angeles County Fire Department Explorer Academy, which takes place over four consecutive weekends from Friday evening until Sunday afternoon. The fourth weekend ends with a graduation ceremony celebrating the juniors’ achievements and showcasing the skills they learned. Station 3 and 54 junior firefighters who pass the Academy are deemed “Certified Explorers” and can participate in department ride-alongs.

The Explorers meet most Sunday mornings throughout the year from 8am-lunchtime and the program operates much like an ROTC program. They must be on time and in a neatly pressed uniform. They line up and the advisors inspect their uniforms; juniors who are not dressed to standard must drop to do push-ups. Then, they change into workout clothes for physical fitness exercises, including running, push-ups in full gear, and practical exercises like hammer swings. Next, they change back into uniform and practice technical skills such as coupling hoses, ropes and knots, first aid/EMS, using SCBAs, and pulling dummies. Juniors cheer each other on during each exercise, encouraging each member so that the whole team is uplifted.

The junior firefighters of Stations 3 and 54 are very proud of their accomplishments and are looked up to by other students at their schools. The program emphasizes teamwork and responsibility at the fire department and outside of it.

For more information about the Los Angeles County Fire Department Explorers, visit http://fire.lacounty.gov/programsevents/YouthFireExplorer.asp.
Additional Resources

Federal

> United States Fire Administration (USFA) - Provides national leadership to foster a solid foundation for our fire and emergency services stakeholders in prevention, preparedness, and response. www.usfa.dhs.gov

> National Incident Management System - Guides departments and agencies at all levels of government, nongovernmental organizations, and the private sector to work seamlessly to prevent, protect against, respond to, recover from, and mitigate the effects of incidents, regardless of cause, size, location, or complexity, in order to reduce the loss of life and property and harm to the environment. www.fema.gov/emergency/nims

> Occupational Safety and Health Administration - Provides information on prevention of fire-related injuries in all workplaces. www.osha.gov/SLTC/firesafety/

> National Fire Academy Volunteer Incentive Program - Intensive six-day educational opportunity designed specifically for volunteer and combination department emergency services personnel. Junior firefighters ages 16-18 are eligible to attend these courses as long as they are accompanied at all times by their legal guardian. www.usfa.fema.gov/nfa/resident/vip/index.shtm

> Fire and Emergency Services Higher Education (FESHE) Program - USFA program that works to establish an organization of post-secondary institutions to promote higher education and to enhance the recognition of the fire and emergency services as profession. Includes a list of programs nationwide for high school student fire service training. www.usfa.fema.gov/nfa/higher_ed/feshe/feshe_direction.shtm

Training Drills

> FireEngineering.com - National fire service magazine and web site featuring a variety of training examples and drills. Please note that not all drills will be suitable for youth. www.fireengineering.com/training.html

> Firehouse.com - National fire service magazine and web site featuring a variety of training examples and drills. Please note that not all drills will be suitable for youth. www.firehouse.com/training-drills

National and International

> NVFC National Junior Firefighter Program - National organization providing tools, resources, and information for all junior firefighter and cadet programs. Includes a listing of junior firefighter camps, NVFC National Junior Firefighter Academies, and other training and activities information. www.nvfc.org/juniors

> Junior Firefighter Program Handbook - Guide from the NVFC National Junior Firefighter Program providing sample Standard Operating Procedures, press release templates, recruitment ideas, and more to help start and grow a local youth program. www.nvfc.org/juniors

> National Volunteer Fire Council - Leading national organization representing volunteer first responders at the national level. Offers dozens of free, online trainings and other health and safety tools and resources. www.nvfc.org

> National Fire Protection Association - Works to reduce the worldwide burden of fire and other hazards on the quality of life by providing and advocating consensus codes and standards, research, training, and education. Provides fire prevention and safety education materials, standards and codes, and training opportunities. www.nfpa.org

> National Fire Protection Association Standard for Fire Fighter Professional Qualifications (NFPA 1001) - Standard identifying the minimum job performance requirements (JPRs) for career and volunteer firefighters whose duties are primarily structural in nature. www.nfpa.org

> American National Standards Institute - National multi-industry standards and accreditation agency. www.ansi.org

> International Fire Service Training Association - Association of fire service personnel who are dedicated to upgrading firefighting techniques and safety through training. www.ifsta.org