

Firefighter Training, S-130

Fire Exercise Day

INSTRUCTIONS TO THE INSTRUCTOR

Exercise set up and logistics:

Instructors will have to establish conditions most nearly representing an actual fire situation for this exercise. Students will construct line and lay hose to contain the fire. Instructors must try to make the exercise as realistic as possible.

IT IS THE RESPONSIBILITY OF EACH LEAD INSTRUCTOR TO TAILOR THIS EXERCISE TO MEET THE NEEDS OF THE LOCAL AREA.

It will be necessary to use more than one field instructor for this exercise. There must be enough qualified instructors to ensure that each student is adequately evaluated. It may be necessary to break the students into individual squads or crews, with instructors filling supervisory roles.

Instructors have the option to set up a station for each performance checklist or blend the performance tasks into one continuous exercise. Remember the goal is to provide realistic experience where students learn proper techniques in a safe environment.

Instructors should demonstrate basic firefighting tasks (refer to performance checklists) and have students pair up to practice the techniques. Students should be corrected on-the-spot as necessary.

Instructors will evaluate students as they perform the tasks in the performance checklist. Any element checked “no” should have an explanation attached in the comments. An element checked “no” does not necessarily signify a failure of the entire course. It is up to the instructor to determine whether or not an individual possesses the skills to pass the course.

Physical Fitness

Maintaining good physical fitness is a critical component of being an effective wildland firefighter. Prior to taking the S-130 field exercise, students must satisfactorily complete the Work Capacity Test or physical fitness test as required by the sponsoring agency or organization.

For more information on fitness requirements refer to the Wildland Fire Qualification System Guide, PMS 310-1 at <http://www.nwcg.gov/>. Information on the work capacity test can be found in the Work Capacity Test – Administrator’s Guide which is also located at <http://www.nwcg.gov/>.

Field Exercise
EXAMPLE

Sequential order of events:

1. Foot travel from classroom to exercise site.
2. Fire briefing/verbal confirmation to see if everyone's pack is fire ready.
3. Begin line construction, trench as necessary.
4. First reverse tool order.
5. Squad rotations - spot patrol/protocol; hotspotting; patrolling.
6. First set of slopovers/spot fires.
7. Second reverse tool order.
8. Retardant drop.
9. Second set of slopovers/spot fires.
10. Tie fire in.
11. Hoselay
12. Third reverse tool order/fire shelter deployment.
13. Tool sharpening.
14. After action review.

Additional items to try and incorporate throughout the exercise:

1. Incorporate use of the Incident Pocket Response Guide.
2. Communication and passing commands/hazards up and down the line.
3. Adhering to the chain of command.
4. Maintaining situation awareness and managing risk.
5. Discussion of LCES, 10/18, anchor points, etc.
6. Leap frogging during the slopover exercises.

REMEMBER:

- **This is just an introduction class.
- **We cannot teach students everything there is to know in one afternoon.
- **Any experience the students get will be beneficial.

DETAILED LESSON OUTLINE

COURSE: Firefighter Training, S-130

MODULE: 13 – Fire Exercise

TIME: 5½ hours

TESTING METHOD: Performance evaluation

TRAINING AIDS: Handtools, engines, hose, fittings, radios, flagging, PPE, vehicles, backpack pumps, firing devices, practice fire shelters, Incident Response Pocket Guide.

Equipment is provided by the authority having jurisdiction that would typically be used at an actual wildland fire emergency.

OBJECTIVES: Upon completion of this unit, when given a live fire or simulated (flag) fire exercise, the students will be able to:

1. Demonstrate proper travel procedures en route to and from a fire.
2. Demonstrate proper use, handling, and maintenance of handtools.
3. Construct progressive and leap frog handline.
4. Construct simple and progressive hoselays.
5. Use escape routes to promptly retreat to a safety zone.
6. Participate in an “after action review.”

**THIS EXERCISE SHOULD INCORPORATE THE BASICS OF
FIREFIGHTING AND INCLUDE AS MUCH OF THE FOLLOWING
AS POSSIBLE:**

- Students receiving a briefing
- Foot travel procedures (hiking in a line, maintaining safe spacing, etc.)
- Communicating fireline commands (bump, take more, take less, hold and improve, lick and go, reverse tool order, etc.)
- Maintaining situation awareness and managing risk
- Calling out hazards
- Maintaining good communication
- Using the chain of command
- Tool inspection and maintenance
- Method of attack
- Progressive and leap frog line construction
- Trenching
- Spot fire teams and gridding the green for spot fires
- Spot fire protocol (containing, securing, mopping up, and flagging)
- Slopover procedures
- Hotspotting teams
- Patrolling
- Cold trailing
- Securing perimeter after containment
- Mopup - dry and wet
- Allowing students to use all the handtools
- Simple and progressive hoselays and engine use

- Field discussion and identification of anchor points, escape routes, and safety zones
- Accident and injury procedures
- Retardant and water drop procedures
- Dozer procedures
- Radio use
- Practice retreating to a safety zone
- Shelter deployment practice in the field
- After action review

If a live fire exercise is not possible, consider using a flag fire scenario.

Suggested tips for a flag fire exercise:

- Simulate a dynamic fire environment by frequently moving the perimeter flags to increase fire growth.
- Use pre-identified colored flagging to represent spot fires. Place spot fires out in the green prior to the exercise and take advantage of likely areas where spot fires will occur.
- Take advantage of student mistakes (incomplete line construction, poor trenching, etc.); simulate slopovers.

Performance Evaluation #1: Transportation Safety

Objective: Given a real or simulated incident, students will travel to and from the incident via foot, vehicle or combination of both. Instructors will observe students and evaluate using the following checklist.

Instructor Checklist: Score by placing a check mark in the box.

- PPE properly worn.
- Safety measures taken (seat belts, life vests, etc.).
- Tools and personnel separated.
- Follows directions of appropriate personnel.
- Appropriate spacing during foot travel.
- Eye protection utilized where necessary.

Student demonstrated proper travel procedures (vehicle, foot, etc.) en route to and from an incident.

Yes _____ No _____

If no is checked, include comments and identify additional training needs.

Performance Evaluation #2: Preparedness

Objective: Demonstrate the proper inspection, wear, and use of assigned personal protective equipment.

Instructor Checklist: Score by placing a check mark in the box.

- Fire resistant pants
- Fire resistant shirt
- Boots
- Hard hat w/ chin strap
- Gloves
- Goggles
- Shroud
- Brush jacket
- Ear plugs
- Fire shelter
- Headlamp
- Fire-line pack
- Canteens

Student wore their personal protective equipment and was prepared for the field sessions.

Yes _____ No _____

If no is checked, include comments and identify additional training needs.

Performance Evaluation #3: Suppression/Handtools

Objectives:

- Demonstrate the proper use of appropriate hand tools during suppression activities (line construction, hot spotting, mopup).
- Construct a control line using at least two coordinated crew techniques.
- Demonstrate the construction of a control line with a cup trench on a steep slope.
- Demonstrate the proper procedures to follow when caught in a retardant/water drop.

Instructor Checklist: Score by placing a check mark in the box.

- A. Demonstrate the proper inspection, maintenance and use of appropriate hand tools during suppression activities (line construction, hot spotting, mopup).
- Inspect tool.
 - Sharpen tool.
 - Safe use of hand tool.
- B. Construct a control line using at least two coordinated crew techniques.
- Proper spacing when walking and working (10 - 15 feet apart).
 - Line extending to mineral soil, water level, or permafrost.
 - Proper intra-crew communications.
 - Proper use of crew for specified method.
 - Proper tool carrying techniques
 - Capable of performing arduous work for extended periods.
 - Able to work as an effective and safe team member.

- C. Demonstrate the construction of a control line with a cup trench on a steep slope.
- Adequate downhill berm.
 - Appropriate tool choice.
 - Adherence to safety procedures.
 - Cup trench can withstand a rolling firebrand representative of the area; rolling pine cones, pieces of wood, logs, palmetto, cacti, nuts.
- D. Demonstrate the proper procedures to follow when caught in a retardant/water drop.

In some instances, it may not be possible to complete an evaluation of this situation. However, the instructor should ensure that students have a thorough understanding of these techniques and their local variations.

Contingency: Student will describe each method and local variation of each. May be done orally or in writing. Instructor evaluates students to ensure they meet the objective.

- Wear full PPE.
- Lie face down, head toward direction of incoming aircraft.
- Helmet on securely with chin strap, feet spread, goggles in place.
- Hand tool held firmly at side.
- Grab something solid such as a rock, tree or shrub.
- Move out of area.

Student demonstrated the knowledge to effectively and safely perform basic firefighting tasks (line construction, hotspotting, spot fire detection, patrolling, mopup, retardant drop procedures, etc.).

Yes _____ No _____

If no is checked, include comments and identify additional training needs.

Performance Evaluation #4: Use of Water: Backpack Pump and Hose Lays

Objectives:

- Demonstrate the proper way to operate and maintain a backpack pump.
- Set up hose lays to move water to the fire.

Instructor Checklist: Score by placing a check mark in the box.

A. Backpack pump

- Fill with clean or strained water.
- Maintain proper footing and stance.
- Maintain proper body position for carrying and lifting.
- Use both straight stream and fog spray.
- Directs stream properly.
- Clear clogged nozzle, if clogged.
- Clean quick connect, if dirty.

B. Hose lays

- Utilize proper hand signals.
- Identify commonly used fittings and hose.
- Set up hose lays and identify hazards to those hose lays.
- Restrict water flow by the use of hose clamp or field-expedient method (charged line).
- Utilize various nozzle settings.
- Utilize proper water application.
- Perform hose retrieval.

Student demonstrated the ability to use a backpack pump and construct simple and progressive hose lays.

Yes _____ No _____

If no is checked, include comments and identify additional training needs.

Performance Evaluation #5: Fire Shelter

Objective: Demonstrate the proper inspection, operation and use of assigned fire shelter.

Instructor Checklist: Score by placing a check mark in the box.

- Inspected shelter per guidelines.
- Selected appropriate site:
 - Away from thick vegetation, trees/snags (fall hazard), tall grass, small trees, brush.
 - Selected a wide area (dozer lines or roads, burned area with no reburn potential, lee-side of ridge tops, flat area on slopes (benches or road cuts).
 - Avoided draws, chimneys and saddles.
- Improved the site by scraping ground fuels:
 - Cleared area at least 4 x 8 feet down to the soil.
- Removed shelter from case and pulled either red ring down to the bottom and up to the other side.
- Demonstrated proper deployment procedures:
 - From a standing position
 - From lying position
 - While escaping
 - In the wind
 - Proper hand and foot position
 - Held shelter down with feet, legs, hands and elbows
 - Foot end facing the advancing fire

- Demonstrated proper entrapment procedures:
 - Moving the shelter
 - Communicated with others
 - Stayed in shelter until received order from supervisor

Student demonstrated the ability to effectively and safely deploy a fire shelter.

Yes _____ No _____

If no is checked, include comments and identify additional training needs.

Performance Evaluation #6: Radio Communications

Objective: Given a two-way portable radio, demonstrate how to prepare, transmit and receive.

Instructor Checklist: Score by placing a check mark in the box.

- A. Prepare portable for use:
- Check antenna.
 - Turn on radio.
 - Adjust squelch: turn knob to the point of garbled noise, then turn back until radio is quiet.
 - Select channel to be used.
- B. To transmit:
- Depress microphone key.
 - Place microphone two to four inches from mouth.
 - Speak distinctly and concisely.
 - Release microphone key.
- C. To receive:
- Turn radio on.
 - Select proper channel.
 - Adjust volume and squelch.
 - Listen

Student demonstrated the ability to use a radio to effectively communicate with supervisors and other crewmembers.

Yes _____ No _____

If no is checked, include comments and identify additional training needs.

Performance Evaluation #7A: Firing Devices (Optional; as conditions allow)

Objective: Given a fusee and a cleared area, demonstrate (1) igniting a fusee, (2) igniting wildland fuel, and (3) extinguishing the fusee.

Instructor Checklist: Score by placing a check mark in the box.

- Sleeves down, gloves on and eye protection in place.
- Remove striker protector.
- Expose igniter.
- Place striker on igniter.
- Turn face away from fusee.
- Light fusee by sharply scratching the igniter across the striker.
- Strike fusee (away from body).
- Apply flame to simulated fuel.
- Extinguish fusee by striking sharply on ground or by placing lighted end in mineral soil.

Performance Evaluation #7B: Drip Torch

Objective: Given a drip torch in proper working order, rags, matches, a cleared area and PPE, correctly demonstrate the proper procedures for (a) assembly, (b) lighting, carrying and spreading burning fuel, extinguishing, and (c) storing the drip torch.

Instructor Checklist: Score by placing a check mark in the box.

- A. Assemble the drip torch:
- Shake fuel.
 - Unscrew locking ring.
 - Unscrew and secure fuel flow plug.
 - Remove spout and inspect gasket, fuel, and wick.
 - Set spout with wick in correct position and secure lock ring.
 - Open air vent.
 - Wipe off spilled fuel.
- B. Demonstrate proper procedure for lighting, carrying and spreading burning fuel, and extinguishing of the drip torch:
- Spread fuel on ground litter or paper.
 - Ignite fuel.
 - Ignite drip torch from ground fire.
 - Demonstrate proper procedure for carrying and spreading burning fuel.
 - Extinguish wick by setting upright and letting wick burn dry.
- C. Storage procedures:
- Let wick cool before storage.
 - Return drip torch to condition of readiness.

Student demonstrated the ability to effectively and safely use firing devices (fusee, drip torch, field expedient).

Yes _____ No _____

If no is checked, include comments and identify additional training needs.

Performance Evaluation #8: Reducing Fire Exposure Threats to Improve Properties (Optional; as conditions allow)

Objective: Given a wildland urban interface scenario, describe four methods to reduce exposure threats to improved structures.

Suggestions to instructors:

If a field exercise is not possible, consider setting up a sand table exercise and facilitating a discussion on wildland urban interface scenarios in your area. See the leadership toolbox at www.fireleadership.gov for more information on sand table exercises.

Instructor Checklist: Score by placing a check mark in any four of the boxes.

- Determine if residents are home.
- Place ladder on side with least fire threat and away from power drop.
- Clean roof of combustible materials.
- Cover vents.
- Remove and scatter fuels away from structure (ladder fuels, wood piles, etc.).
- Clear area around above-ground fuel tank, shutting off tank.
- Place combustible outside furniture inside structure.
- Close windows and doors, including garage, leaving unlocked.
- As a last resort, you may need to use the structure as refuge.
- Have garden hoses charged.

Performance Evaluation #9: MopUp (Optional; as conditions allow)

Objective: Demonstrate the ability to mop up, to include patrolling, a fire area so that burning fuels that threaten escape are located and extinguished.

Instructor Checklist: Score by placing a check mark in the box.

- Started mop up as soon as line construction and burnout was completed.
- Mopped up most threatening areas first.
- Considered potential for problems from snags, punky logs, and fuel concentrations outside the control line.
- Searched for and dug out burning roots and stumps near the fireline.
- Scattered concentrations of burning fuels to reduce heat and danger of spotting.
- Trenched below, blocked, or turned heavy logs, stumps or similar material so they cannot roll.
- Used back of hands to feel for possible smoldering spots close to the line.
- Used water in conjunction with hand tools where possible for practical.
- Used water sparingly, matched amount of water to the job.
- Scraped or stirred the fuel while applying water when mopping up deep burning fuels such as peat, duff or needles.
- Patrolled the fire area cold trailing where applicable.

Student demonstrated the knowledge to effectively and safely perform basic firefighting tasks (cold trailing, patrolling, mopup, etc.).

Yes _____ No _____

If no is checked, include comments and identify additional training needs.

