
Ropes and Knots

Tying a Fire Service Bowline

Lesson Plan 2

FIREFIGHTER 1
LESSON PLAN #2

<u>TOPIC:</u>	How to Tie a Bowline
<u>LEVEL:</u>	2
<u>TIME:</u>	15 Minutes
<u>OBJECTIVES:</u>	One length of rope, gloves.
Given:	The student will tie a bowline
Performance	Completing all operations within 30 seconds according to the job breakdown.
Standard:	IFSTA Essentials of Fire Fighting
<u>REFERENCES:</u>	One length of rope, gloves, and job breakdown.
<u>MATERIALS NEEDED:</u>	One (1) length of rope One (1) pair of gloves One (1) stop watch One (1) performance test worksheet

PREPARATION

The effective use of ropes, knots, and hitches is one of the basic foundations of a firefighter's work. It is absolutely critical that you comprehend and perform all rope work automatically and with precision.

The bowline is probably the most frequently used knot in the fire service because of its two main attributes, which are, a slip proof not and easy to untie.

Many fire situations during fire department operations call for a loop in the end of a rope, provided by a bowline.

Point out some uses of the bowline, talk about how the knot does not bind when tightened, easy to untie when not needed, and still retains 90% of the rope strength.

Ensure safety points such as wearing gloves are described and why. Don't forget to describe the parts of the rope, the running line, the standing end, the bitter end, a loop, and a bight. This is general rope information not necessarily specific to the bowline.

PRESENTATION

OPERATIONS

1. Take running line
2. Make a loop
3. Grasp bitter end
4. Place bitter end through loop
5. Pass bitter end behind running line
6. Place bitter end back through loop
7. Tighten

KEY POINTS

Show the running line in either hand, show what part is the running line and what the standing line is. Create loop with running line on top, standing line on bottom. Grasp bitter end in opposite hand, pass through loop; pass bitter end **BEHIND** the standing line; back through the loop. Tighten knot, dress knot.

APPLICATION

Tie ropes	Provide one rope to each student
Gloves	Enforce safety by requiring gloves be worn to tie knots, explain why
Demonstrate	Tie knot at normal speed again (moving from presentation to application).
Demonstrate	Tie again using step by step method
Demonstrate	Tie again, again at normal speed
Observe	Have students start tying the knot, observe their progress, encourage success, correct where necessary.
Prepare	Once satisfied by observation students are ready for next step, ask them if they are ready for evaluations.

EVALUATION

Prepare for evaluations

Ensure candidates are ready for evaluations. Explain passing scores, expectations, standards

Written quiz

Quiz can be given either prior to or immediately after practical test. Grade quiz before candidates leave, show scores to each candidate in private. Passing score is 80%

Practical test

Perform the practical test in seclusion with each candidate. The knot must be completed in no more than 30 seconds. The time will begin on the command "Go." The time will end when the knot is correctly completed to include dressing the knot as necessary.

This concludes this training session. Thank those who participated, ensure any information such as next training session is provided, that all paperwork including roster has been completed.

Equipment needed:

One (1) length of rope
One (1) pair of gloves
One (1) stop watch
One (1) performance test worksheet

Behavioral Objective:

Given:

One (1) length of rope, gloves

Performance:

The candidate shall tie a bowline

Standard

Complete all operations within 30 seconds according to the job performance requirements.

Name: _____ Class: _____ Date: _____

Bowline quiz

True/False

Indicate whether the statement is true or false by entering a T or F

- _____ 1. The Bowline knot is used to create an easily untied loop in a working rope.
- _____ 2. The bowline is probably one of the least used knots a firefighter may use.

Multiple Choice

Identify the choice the best completes the statement or answers the question

- _____ 3. The rope portion that is used for creating the loop is called the:
- | | |
|------------------|-----------------|
| a. bitter end | c. running end |
| b. standing line | d. forward line |
- _____ 4. Wearing gloves is necessary to:
- | | |
|---|--|
| a. protect hands from rope contaminants | c. protect rope from hand contaminants |
| b. make task harder | d. give better grip on road |
- _____ 5. The two main attributes of the Bowline are:
- | | |
|--|--|
| a. slip proof and hard to untie | c. slip proof and easy to untie |
| b. adjustable (slip) and easy to untie | d. adjustable (slip) and hard to untie |

Tie a Bowline

Manipulative Performance Test Record

STUDENT: _____ **DATE:** _____

COMMENTS:

TOTAL POSSIBLE POINTS: 10

DEFICIENCY POINTS: _____

STUDENT'S FINAL SCORE: _____

PASSING SCORE: _____

MAXIMUM ALLOTTED TIME: 30 SEC.

STUDENT'S TIME: _____

PASS: _____

FAIL: _____

Reasons for disqualifications: (if applicable)

EVALUATOR'S SIGNATURE: _____

Bowline quiz

Answer sheet

TRUE/FALSE

1. ANS: T
 Loops in ropes are quite handy but need to be easily untied when not needed.
2. ANS: F
 Although the figure of eight is being used more and more, a well tied bowline knot is still a popular knot.

MULTIPLE CHOICE

3. Ans: B
 A matter of rope terminology
4. Ans: A
 This is a safety item that needed emphasis in the class delivery
5. Ans: C
 The bowline is popular because it is slip proof and easy to untie when no longer needed.

5.1 GENERAL REQUIREMENTS

Evaluation Sheet:

5.1.2 GENERAL SKILL REQUIREMENTS – KNOTS

Skills Sheet: B

Standard _____

Candidate: _____

Date: _____

STANDARD: 5.1.2 NFPA 1001, 2013 Edition	TASK: Tie the following knot: Fire Service Bowline knot,				
PERFORMANCE OUTCOME: The candidate, while operating on a simulated fire ground, shall be able to tie a Fire Service Bowline with a safety knot					
CONDITIONS: Given appropriate and adequate rope(s) and while wearing protective gloves, the candidate shall demonstrate the ability to tie the fire service bowline finished with a safety knot.					
NO.	TASK STEPS	FIRST TEST		RETEST	
		Pass	Fail	Pass	Fail
1.	Bowline knot				
6.	Safety knot(s)				
RETEST APPROVED BY:			RETEST EVALUATOR:		

Evaluator/Candidate Comments:

Evaluator (Print & Sign)

Date

Candidate

Date

Re-Test Evaluator

Date

Re-Test Candidate

Date

CLASS ROSTER

SUBJECT:

DATE: TIME:

STUDENT LEVEL: INSTRUCTOR:

RE/CERTIFICATION: LOCATION:

	NAME & SIGNATURE	WRITTEN SCORE	PRACTICAL PASS/FAIL
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

SPECIAL NOTE: The instructor is responsible for ensuring that the class roster is complete and handed in to the Training Division by the end of the shift.